

ADDITIONAL NOTES ON THE ERIOCAULACEAE. XVI

Harold N. Moldenke

A considerable quantity of notes and herbarium material has come to my attention since the previous installments in this series were prepared. It seems worthwhile to place this information on record in these series of notes for the benefit of future workers on this group.

ERIOCAULACEAE Lindl.

Additional & emended bibliography: Petiv., *Gaz. Nat.* 10, pl. 6, fig. 2. 1702; J. E. Sm. in Rees, *Cycl.* 13. 1809; S. Ell., *Sketch Bot.* 2: 564—567. 1824; Desv., *Ann. Sci. Nat. Paris*, sér. 1, 13: 45—47, pl. 5. 1828; Raf., *Atl. Journ.*, pr. 1, 121. 1832; Colla, *Herb. Pedem.* 483—484. 1836; Raf., *Autikon Bot.*, pr. 1, 188—189. 1840; Benth., *Pl. Hartw.* 28. 1840; Steud., *Nom. Bot.*, ed. 2, 1: 585. 1840; G. Gardn. in Hook. f., *Icon. Pl.* 6 [new ser., 2]: pl. 525. 1843; Schlecht., *Linnaea* 18: 434—436. 1844; W. Griff., *Notul.* 3: 112—122, pl. 159. 1851; D. Dietr., *Syn. Pl.* 5: 259—268. 1852; Steud., *Syn. Pl. Glum.* 2 (Cyp.): 261, 267—283, 332—334, 340, 342, & 347. 1855; F. Muell., *Fragm.* 1: 92—96. 1859; Körn. in Mart., *Fl. Bras.* 3 (1): [271]—508, pl. 38—62. 1863; Griseb., *Fl. Brit. W. Ind.*, pr. 1, 526. 1864; Sauv., *Fl. Cub.* 162. 1868; J. G. Baker, *Journ. Linn. Soc. Lond. Bot.* 20: 277—279. 1883; S. Wats., *Proc. Am. Acad.* 22: 420. 1887; Wawra, *Itin. Princ. S. Coburg* 2: 96. 1888; F. Muell., *Proc. Linn. Soc. New S. Wales*, ser. 2, 5: 250. 1890; Engl., *Abh. Preuss. Akad. Wiss.* 1891: 154. 1892; Sessé & Moc., *Fl. Mex.*, ed. 1 [La Naturaleza, ser. 2, 2: App. 2], 17. 1893; Engl., *Abh. Preuss. Akad. Wiss.* 1894: 14. 1894; Jacks. in Hook. f. & Jacks., *Ind. Kew.*, pr. 1, 2: 681 & 1283. 1895; Engl., *Pflanzenw. Ost-Afr. C.* 133. 1895; Schinz, *Bull. Herb. Boiss.*, ser. 1, 4, App. 3: 35. 1896; N. E. Br. in Thisel.-Dyer, *Fl. Cap.* 7: 54—55. 1897; Schinz, *Mém. Herb. Boiss.* 10: 76. 1900; Britten, *Journ. Bot.* 38: 481—483. 1900; Pilg. in Engl., *Bot. Jahrb.* 30: 146—147. 1901; Durand & Jacks., *Ind. Kew. Suppl.* 1, pr. 1, 158. 1902; Thisel.-Dyer, *Ind. Kew. Suppl.* 2: 70 & 203. 1904; Rendle, *Journ. Linn. Soc. Lond.* 37: 475. 1906; Beauverd, *Bull. Herb. Boiss.*, sér. 2, 8: 283, fig. 9A. 1908; H. Lecomte, *Journ. de Bot.* 21: 89 & [101]—109. 1908; Alv. Silv., *Fl. Serr. Min.* 33—34. 1908; H. Lecomte, *Bull. Soc. Bot. France* 55: 571—573 (1908) and 55: 643—648. 1909; Druce, *Pharm. Journ.* 29: 700. 1909; Beauverd, *Bull. Herb. Boiss.*, sér. 2, 8: 986—988. 1909; E. D. Merr., *Philip. Journ. Sci. Bot.* 5: 336. 1910; Nakai in Fedde, *Repert. Sp. Nov.* 9: 466. 1911; A. Chiov., *Ann. Bot. Roma* 9: 148. 1911; Nakai, *Bull. Géogr. Bot.* 21: 139. 1911; H. Lecomte, *Not. Syst.* 2: 215. 1912; Prain, *Ind. Kew. Suppl.* 4, pr. 1, 82. 1913; H. Lecomte, *Not. Syst.* 2: 380. 1913; Nakai in Matsumura, *Icon. Pl. Koisikav.* 1: 157, pl. 79 (1913) and 2: 35—47, pl. 102—108. 1914; Koidz., *Bot. Mag. Tokyo* 28:

171. 1914; Guillaumin & Beauvis., Ann. Soc. Bot. Lyon 38: 40. 1914; Fyson, Kew Bull. Misc. Inf. 1914: 330—331. 1914; E. D. Merr., Philip. Journ. Sci. Bot. 10: 290. 1915; H. N. Ridl., Journ. Fed. Malay States Mus. 6: 191. 1915; Komarov, Bull. Jard. Bot. Pétersb. 16: 156. 1916; H. N. Ridl., Trans. Linn. Soc. Lond. Bot. 9: 240. 1916; R. E. Fries, Wiss. Ergebn. Schwed. Rhod.-Kongo-Exped. 1911—12 1: 218. 1916; Ewart & Cookson in Ewart & Davies, Fl. N. Terr. 67. 1917; Nakai, Bot. Mag. Tokyo 31: 97. 1917; N. L. Britton, Bull. Torrey Bot. Club 44: 31—32. 1917; C. H. Wright, Kew Bull. Misc. Inf. 1919: 264. 1919; H. N. Ridl., Journ. Fed. Malay States Mus. 10: 155. 1920; Hand.-Mazz., Anz. Akad. Wiss. Wien 57: 238. 1920; Prain, Ind. Kew. Suppl. 5, pr. 1, 97. 1921; Rendle, Journ. Linn. Soc. Lond. Bot. 45: 259. 1921; Dinter in Fedde, Repert. Sp. Nov. 17: 260. 1921; Haines, Bot. Bihar & Orissa 6: 1066—1071. 1924; H. N. Ridl., Fl. Malay Penins. 5: 133—136. 1925; Kudo, Jap. Journ. Bot. 2: 248. 1925; Mak., Journ. Jap. Bot. 3: 26. 1926; A. W. Hill, Ind. Kew. Suppl. 6: 78—79. 1926; Miyabe & Nakai, Bot. Mag. Tokyo 42: 479. 1928; Honda, Bot. Mag. Tokyo 42: 507. 1928; A. W. Hill, Ind. Kew. Suppl. 7: 88—89. 1929; C. E. C. Fischer, Kew Bull. Misc. Inf. 1930: 159—161. 1930; Markötter, Ann. Univ. Stellenb. 8A (1): 10. 1930; Ohwi, Bot. Mag. Tokyo 44: 566—567 (1930) and 45: 196 & 389. 1931; Honda, Bot. Mag. Tokyo 45: 299. 1931; C. E. C. Fischer, Kew Bull. Misc. Inf. 1931: 261. 1931; C. E. C. Fischer in Gamble, Fl. Presid. Madras 9: 1607—1620. 1931; Bullock, Kew Bull. Misc. Inf. 1932: 507. 1932; A. W. Hill, Ind. Kew. Suppl. 8: 87. 1933; Masamune, Mem. Fac. Sci. Agr. Taihoku Univ. 11, Bot. 4: 536—538. 1934; Wang & Tang, Contrib. Inst. Bot. Nat. Acad. Peiping 2: 133. 1934; C. E. C. Fischer, Kew Bull. Misc. Inf. 1935: 159. 1935; Malme, Arkiv Bot. Stockh. 26A, 9: 8. 1935; Hand.-Mazz., Symb. Sin. 7: 1246. 1936; P. C. Standl., Field Mus. Publ. Bot. 12: 90. 1936; Hand.-Mazz., Sinensia 7: 619. 1936; Satake, Bot. Mag. Tokyo 51: 285—291. 1937; Prain, Ind. Kew. Suppl. 4, pr. 2, 82. 1938; Satake in Nakai, Icon. Pl. As. Orient. 2: 175. 1938; Satake & Hara, Bot. Mag. Tokyo 52: 400. 1938; A. W. Hill, Ind. Kew. Suppl. 9: 105. 1938; Milne-Redhead in Hook., Icon. Pl. 34: pl. 3388 & 3389. 1939; Satake, Bull. Tokyo Sci. Mus. 4: [Rev. Jap. Erioc.] 1—[74], pl. 1—12. 1940; Durand & Jacks., Ind. Kew. Suppl. 1, pr. 2, 158. 1941; Miyabe & Satake, Acta Phytotax. & Geobot. Kyoto 13: 280. 1943; Masamune, Trans. Nat. Hist. Soc. Taiwan 33: 13 & 25—26. 1943; Raf., Autikon Bot., pr. 2, 188 & 189. 1943; Castell. in Descole, Gen. & Sp. Pl. Argent. 3: 83—88, pl. 17. 1945; León, Fl. Cuba 1: 278—284. 1946; Abbiatti, Revist. Mus. La Plata, new ser., Bot. 6: 323—341, pl. 2 (1), fig. 4 (d) & 6. 1946; Raf., Atl. Journ., pr. 2, 121. 1946; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 2, 1: 877—880 (1946) and 2: 681 & 1283. 1946; Hill & Salisb., Ind. Kew. Suppl. 10: 86. 1947; Meikle, Kew Bull. Misc. Inf. 1948: 472 (1949) and 1950: 231. 1950; Suesseng. & Heine, Mitt. Bot. Staatssamml. München 2: 57. 1950; E. J. Salisb., Ind. Kew. Suppl. 11: 88. 1953; Koyama, Philip. Journ. Sci. Bot. 84: 369—371. 1956; J. N.

Mishra, *Mycologia* 48: 407—409, fig. 1 d—f. 1956; Bourdu, *Bull. Soc. Bot. France* 104: 156. 1957; H. Hess, *Bericht. Schweiz. Bot. Gesell.* 67: 84. 1957; Durand & Jacks., *Ind. Kew. Suppl.* 1, pr. 3, 158. 1959; G. Taylor, *Ind. Kew. Suppl.* 12: 55. 1959; Jacks. in *Hook. f. & Jacks., Ind. Kew.*, pr. 3, 1: 877—880 (1960) and 2: 681 & 1283. 1960; Prain, *Ind. Kew. Suppl.* 5, pr. 2, 97. 1960; Griseb., *Fl. Brit. W. Ind.*, pr. 2, 526. 1963; G. Taylor, *Ind. Kew. Suppl.* 13: 52. 1966; L. O. Williams, *Fieldiana Bot.* 31: 255—256. 1967; Moldenke, *Phytologia* 17: 450—464. 1968; D. Walker, *Journ. Ecol. [Brit.]* 56: 451. 1968.

Jackson (1893) consistently cites Körnicke's monograph of this group in *Linnaea*, volume 27, as "1854", but the evidence seems to indicate that it was not issued until April, 1856.

#### ERIOCAULON Gron.

Additional & emended bibliography: *Petiv., Gaz. Nat.* 10, pl. 6, fig. 2. 1702; J. E. Sm. in *Rees, Cycl.* 13. 1809; S. Ell., *Sketch Bot.* 2: 564—567. 1824; Desv., *Ann. Sci. Nat. Paris, sér.* 1, 13: 45—47, pl. 5. 1828; Colla, *Herb. Pedem.* 483—484. 1836; Raf., *Autikon Bot.*, pr. 1, 188—189. 1840; Benth., *Pl. Hartw.* 28. 1840; G. Gardn. in *Hook. f., Icon. Pl.* 6 [new ser., 2]: pl. 525. 1843; Schlecht., *Linnaea* 18: 434—436. 1844; W. Griff., *Notul.* 3: 112—122, pl. 159. 1851; D. Dietr., *Syn. Pl.* 5: 259—268. 1852; Steud., *Syn. Fl. Glum.* 2 (Cyp.): 261, 268—283, 332—334, & 342. 1855; F. Muell., *Fragm.* 1: 92—96. 1859; Griseb., *Fl. Brit. W. Ind.*, pr. 1, 526. 1864; Sauv., *Fl. Cub.* 162. 1868; J. G. Baker, *Journ. Linn. Soc. Lond. Bot.* 20: 277—278. 1883; S. Wats., *Proc. Am. Acad.* 22: 420. 1887; Wawra, *Itin. Princ. S. Coburg* 2: 96. 1888; Engl., *Abh. Preuss. Akad. Wiss.* 1891: 154. 1892; F. Muell., *Proc. Linn. Soc. New S. Wales, ser. 2, 5:* 250. 1890; Sessé & Moc., *Fl. Mex.*, ed. 1 [La *Naturaleza*, ser. 2, 2: App. 2], 17. 1893; Engl., *Abh. Preuss. Akad. Wiss.* 1894: 14. 1894; Jacks. in *Hook. f. & Jacks., Ind. Kew.*, pr. 1, 2: 681 & 1283. 1895; Engl., *Pflanzenw. Ost-Afr. C:* 133. 1895; Schinz, *Bull. Herb. Boiss., sér. 1, 4, App. 3:* 35. 1896; N. E. Br. in *Thiselt.-Dyer, Fl. Cap.* 7: 54—55. 1897; Britten, *Journ. Bot.* 38: 481—483. 1900; Schinz, *Mém. Herb. Boiss.* 10: 76. 1900; Pilg. in *Engl., Bot. Jahrb.* 30: 146—147. 1901; Durand & Jacks., *Ind. Kew. Suppl.* 1, pr. 1, 158. 1902; *Thiselt.-Dyer, Ind. Kew. Suppl.* 2: 70 & 203. 1904; Rendle, *Journ. Linn. Soc. Lond. Bot.* 37: 475. 1906; Beauverd, *Bull. Herb. Boiss., sér. 2, 8:* 283, fig. 9A. 1908; H. Lecomte, *Journ. de Bot.* 21: 89 & [101]—109. 1908; Alv. Silv., *Fl. Serr. Min.* 33—34. 1908; H. Lecomte, *Bull. Soc. Bot. France* 55: 571—573 (1908) and 55: 643—648. 1909; Prain, *Ind. Kew. Suppl.* 3: 69—70. 1908; Druce, *Pharm. Journ.* 29: 700. 1909; Beauverd, *Bull. Herb. Boiss., sér. 2, 8:* 986—988. 1909; E. D. Merr., *Philip. Journ. Sci. Bot.* 5: 336. 1910; Nakai in *Fedde, Repert. Sp. Nov.* 9: 466. 1911; A. Chiov., *Ann. Bot. Roma* 9: 148. 1911; Nakai, *Bull. Géogr. Bot.* 21: 139. 1911; H. Lecomte, *Not. Syst.* 2: 215. 1912; Prain, *Ind. Kew. Suppl.* 4, pr. 1, 82. 1913; H. Lecomte, *Not. Syst.* 2: 380. 1913; Nakai in *Matsumura, Icon. Pl.*

- Koisikav. 1: 157, pl. 79 (1913) and 2: 35—47, pl. 102—108. 1914; Koidz., Bot. Mag. Tokyo 28: 171. 1914; Guillaumin & Beauvis., Ann. Soc. Bot. Lyon 38: 40. 1914; Fyson, Kew Bull. Misc. Inf. 1914: 330—331. 1914; E. D. Merr., Philip. Journ. Sci. Bot. 10: 290. 1915; H. N. Ridl., Journ. Fed. Malay States Mus. 6: 191. 1915; Komarov, Bull. Jard. Bot. Pétersb. 46: 156. 1916; H. N. Ridl., Trans. Linn. Soc. Lond. Bot. 9: 240. 1916; R. E. Fries, Wiss. Ergebn. Schwed. Rhod.-Kongo-Exped. 1911—12 1: 218. 1916; Ewart & Cookson in Ewart & Davies, Fl. N. Terr. 67. 1917; Nakai, Bot. Mag. Tokyo 31: 97. 1917; N. L. Britton, Bull. Torrey Bot. Club 44: 31—32. 1917; C. H. Wright, Kew Bull. Misc. Inf. 1919: 264. 1919; H. N. Ridl., Journ. Fed. Malay States Mus. 10: 155. 1920; Hand.-Mazz., Anz. Akad. Wiss. Wien 57: 238. 1920; Prain, Ind. Kew. Suppl. 5, pr. 2, 97. 1921; Rendle, Journ. Linn. Soc. Lond. Bot. 45: 259. 1921; Dinter in Fedde, Repert. Sp. Nov. 17: 260. 1921; Haines, Bot. Bihar & Orissa 6: 1066—1071. 1924; Herzog in Fedde, Repert. Sp. Nov. 20: 82—88. 1924; Ruhl. in Fedde, Repert. Sp. Nov. 22: 29—35. 1925; Kudo, Jap. Journ. Bot. 2: 248. 1925; Mak., Journ. Jap. Bot. 3: 26. 1926; A. W. Hill, Ind. Kew. Suppl. 6: 78—79. 1926; Miyabe & Nakai, Bot. Mag. Tokyo 42: 479. 1928; Honda, Bot. Mag. Tokyo 42: 507. 1928; A. W. Hill, Ind. Kew. Suppl. 7: 88—89. 1929; C. E. C. Fischer, Kew Bull. Misc. Inf. 1930: 159—161. 1930; Markötter, Ann. Univ. Stellenb. 8A (1): 10. 1930; Ohwi, Bot. Mag. Tokyo 44: 566—567 (1930) and 45: 196 & 389. 1931; Honda, Bot. Mag. Tokyo 45: 299. 1931; C. E. C. Fischer, Kew Bull. Misc. Inf. 1931: 261. 1931; Herzog in Fedde, Repert. Sp. Nov. 29: 202—213. 1931; C. E. C. Fischer in Gamble, Fl. Presid. Madras 9: 1607—1619. 1931; Bullock, Kew Bull. Misc. Inf. 1932: 507. 1932; A. W. Hill, Ind. Kew. Suppl. 8: 87. 1933; Arwidsson, Bot. Notiser 1934: 83—87. 1934; Wang & Tang, Contrib. Inst. Bot. Nat. Acad. Peiping 2: 133. 1934; Herter, Rev. Sudam. Bot. 2: 125. 1935; C. E. C. Fischer, Kew Bull. Misc. Inf. 1935: 159. 1935; Malme, Arkiv Bot. Stockh. 26A, 9: 8. 1935; Hand.-Mazz., Symb. Sin. 7: 1246. 1936; P. C. Standl., Field Mus. Publ. Bot. 12: 90. 1936; Hand.-Mazz., Sinensia 7: 619. 1936; Prain, Ind. Kew. Suppl. 4, pr. 2, 82. 1938; Satake in Nakai, Icon. Fl. As. Orient. 2: 175. 1938; Satake & Hara, Bot. Mag. Tokyo 52: 400. 1938; A. W. Hill, Ind. Kew. Suppl. 9: 105. 1938; Milne-Redhead in Hook., Icon. Pl. 34: pl. 3388 & 3389. 1939; Satake, Bull. Tokyo Sci. Mus. 4: [Rev. Jap. Erioc.] 1—[74], pl. 1—12. 1940; Durand & Jacks., Ind. Kew. Suppl. 1, pr. 2, 158. 1941; Miyabe & Satake, Acta Phytotax. & Geobot. Kyoto 13: 280. 1943; Masamune, Trans. Nat. Hist. Soc. Taiwan 33: 13 & 25—26. 1943; Castell. in Descole, Gen. & Sp. Pl. Argent. 3: 83—88, pl. 17. 1945; León, Fl. Cuba 1: 279—281. 1946; Abbiatti, Revist. Mus. La Plata, new ser., Bot. 6: 323—341, pl. 2 (1), fig. 4 (d) & 6. 1946; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 2, 1: 877—880 (1946) and 2: 681 & 1283. 1946; Hill & Salisb., Ind. Kew. Suppl. 10: 86. 1947; Meikle, Kew Bull. Misc. Inf. 1948: 472 (1949) and 1950: 231. 1950; Suesseng. & Heine, Mitt. Bot. Staats-samml. München 2: 57. 1950; E. J. Salisb., Ind. Kew. Suppl. 11: 88. 1953; Koyama, Philip. Journ. Sci. Bot. 84: 369—371. 1956;

J. N. Mishra, *Mycologia* 48: 407--409, fig. 1 d--f. 1956; Bourdu, *Bull. Soc. Bot. France* 104: 156. 1957; H. Hess, *Bericht. Schweiz. Bot. Gesell.* 67: 84. 1957; Durand & Jacks., *Ind. Kew. Suppl.* 1, pr. 3, 158. 1959; G. Taylor, *Ind. Kew. Suppl.* 12: 55. 1959; Jacks. in *Hook. f. & Jacks.*, *Ind. Kew.*, pr. 3, 1: 877--880 (1960) and 2: 681 & 1283. 1960; Prain, *Ind. Kew. Suppl.* 5, pr. 2, 97. 1960; Griseb., *Fl. Brit. W. Ind.*, pr. 2, 526. 1963; G. Taylor, *Ind. Kew. Suppl.* 13: 52. 1966; L. O. Williams, *Fieldiana Bot.* 31: 255--256. 1967; Moldenke, *Phytologia* 17: 450--464. 1968; D. Walker, *Journ. Ecol. [Brit.]* 56: 451. 1968.

Jackson (1893) consistently cites Körnicke's monograph of this genus in *Linnaea*, volume 27, as "1854", but the evidence seems to indicate that it was not issued until April of 1856.

#### ERIOCAULON ABYSSINICUM Hochst.

Additional bibliography: Hochst., *Flora* 28: 341. 1845; Jacks. in *Hook. f. & Jacks.*, *Ind. Kew.*, pr. 1, 1: 877. 1893; Ruhl. in *Engl., Pflanzenreich* 13 (4-30): 281, 282, & 284. 1903; Jacks. in *Hook. f. & Jacks.*, *Ind. Kew.*, pr. 2, 1: 877 (1946) and pr. 3, 1: 877. 1960; Moldenke, *Phytologia* 17: 450. 1968.

#### ERIOCAULON ACANTHOCEPHALUM Griff.

Synonymy: *Eriocaulon acanthocephalus* Griff., *Notul.* 3: 118, *sphalm.* 1851.

Bibliography: W. Griff., *Notul.* 3: 116--118. 1851.

Nothing is known to me about this taxon except the detached characters mentioned by Griffith. The binomial has never been recorded in the *Index Kewensis* or any of its supplements to date.

#### ERIOCAULON ACHITON Körn.

Additional bibliography: Körn., *Linnaea* 27: 630. 1854; Jacks. in *Hook. f. & Jacks.*, *Ind. Kew.*, pr. 1, 1: 877. 1893; Ruhl. in *Engl., Pflanzenreich* 13 (4-30): 13, 103, 111, & 284. 1903; H. Lecomte, *Journ. de Bot.* 21: 108. 1908; Haines, *Bot. Bihar & Orissa* 6: 1067 & 1070--1071. 1924; Jacks. in *Hook. f. & Jacks.*, *Ind. Kew.*, pr. 2, 1: 877 (1946) and pr. 3, 1: 877. 1960; Moldenke, *Phytologia* 17: 450. 1968.

Jackson (1893) reduces this taxon to synonymy under *E. nigricans* R. Br., but the latter is now itself reduced to synonymy under *E. pygmaeum* Soland. The specific epithet of *E. achiton* is sometimes written with its initial letter uppercased for no valid reason. The C. B. Clarke 16101, distributed as *E. achiton*, is actually *E. gregatum* Körn.

#### ERIOCAULON ADAMESII Meikle

Additional bibliography: Meikle, *Kew Bull. Misc. Inf.* 1948: 472. 1949; E. J. Salisb., *Ind. Kew. Suppl.* 11: 88. 1953; Moldenke, *Phytologia* 17: 384. 1968.

#### ERIOCAULON AEQUINOCTIALE Ruhl.

Additional bibliography: Ruhl. in *Engl., Pflanzenreich* 13 (4-

30): 42, 47, & 284. 1903; Prain, Ind. Kew. Suppl. 3: 69. 1908; Moldenke, Phytologia 17: 384. 1968.

**ERIOCAULON AFRICANUM** Hochst.

Additional bibliography: Hochst., Flora 28: 340. 1845; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 1, 1: 877. 1893; Ruhl. in Engl., Pflanzenreich 13 (4-30): 61, 69, & 284. 1903; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 2, 1: 877 (1946) and pr. 3, 1: 877. 1960; Moldenke, Phytologia 17: 384. 1968.

**ERIOCAULON AFZELIANUM** Wikstr.

Emended synonymy: Eriocaulon kouroussense H. Lecomte, Bull. Soc. Bot. France 55: 644. 1909.

Additional bibliography: Körn., Linnaea 27: 680. 1856; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 1, 1: 877. 1893; Ruhl. in Engl., Pflanzenreich 13 (4-30): 63, 83, & 284. 1903; H. Lecomte, Bull. Soc. Bot. France 55: 644-645. 1909; Prain, Ind. Kew. Suppl. 4, pr. 1, 82 (1913) and pr. 2, 82. 1938; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 2, 1: 877 (1946) and pr. 3, 1: 877. 1960; Moldenke, Phytologia 17: 384--385. 1968.

**ERIOCAULON ALATUM** H. Lecomte

Additional bibliography: H. Lecomte, Journ. de Bot. 21: 102 & 104-105, fig. 2. 1908; Prain, Ind. Kew. Suppl. 4, pr. 1, 82 (1913) and pr. 2, 82. 1938; Moldenke, Phytologia 17: 385. 1968.

Illustrations: H. Lecomte, Journ. de Bot. 21: 105, fig. 2. 1908.

**ERIOCAULON ALLEIZETTEI** Moldenke

Additional bibliography: G. Taylor, Ind. Kew. Suppl. 12: 55. 1959; Moldenke, Phytologia 17: 385. 1968.

**ERIOCAULON ALPESTRE** Hook. f. & Thoms.

Additional & emended bibliography: Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 1, 1: 877. 1893; Durand & Jacks., Ind. Kew. Suppl. 1, pr. 1, 158. 1902; Ruhl. in Engl., Pflanzenreich 13 (4-30): 65, 95-96, & 284. 1903; Durand & Jacks., Ind. Kew. Suppl. 1, pr. 2, 158. 1941; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 2, 1: 877. 1946; Durand & Jacks., Ind. Kew. Suppl. 1, pr. 3, 158. 1959; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 3, 1: 877. 1960; Moldenke, Phytologia 17: 450. 1968.

**ERIOCAULON ALPINUM** Van Royen

Bibliography: D. Walker, Journ. Ecol. [Brit.] 56: 451. 1968. Nothing is known to me about this taxon.

**ERIOCAULON ALTOGIBBOSUM** Ruhl.

Synonymy: Eriocaulon alto-gibbosum Ruhl. in Engl., Pflanzenreich 13 (4-30): 18, 54, & 284. 1903.

Additional bibliography: Pilg. in Engl., Bot. Jahrb. 30: 146. 1901; Ruhl. in Engl., Pflanzenreich 13 (4-30): 18, 43, 54, & 284.

1903; Prain, Ind. Kew. Suppl. 3: 69. 1908; Moldenke, Phytologia 17: 386—387. 1968.

The index to Ruhland's monograph (1903) cites this species to page "64" instead of to 54. Consultation of the original publication reveals that I have been in error in writing the specific epithet of this taxon with a hyphen in my previous publications and annotation of specimens. It was originally proposed without the hyphen.

ERIOCAULON AMANOANUM Koyama

Additional bibliography: G. Taylor, Ind. Kew. Suppl. 13: 52. 1966; Moldenke, Phytologia 17: 387. 1968.

ERIOCAULON AMBOËNSE Schinz

Additional & emended bibliography: Schinz, Bull. Herb. Boiss., sér. 1, 4, app. 3: 35. 1896; Ruhl. in Engl., Pflanzenreich 13 (4-30): 112 & 284. 1903; Thiselt.-Dyer, Ind. Kew. Suppl. 2: 70. 1904; H. Hess, Bericht. Schweitz. Bot. Gesell. 65: 160—161, fig. 1, & 176—178, pl. 9, fig. 3. 1955; Moldenke, Phytologia 17: 450. 1968.

Illustrations: H. Hess, Bericht. Schweitz. Bot. Gesell. 65: 160, fig. 1, & pl. 9, fig. 3. 1955.

Hess (1955) tells us, among other things, that this species often grows in association with E. gilgianum Ruhl. The type is Schinz 859.

ERIOCAULON AMPHIBIUM Rendle

Additional bibliography: Prain, Ind. Kew. Suppl. 4, pr. 1, 82 (1913) and pr. 2, 82. 1938; Moldenke, Phytologia 17: 387. 1968.

ERIOCAULON ANDONGENSE Welw.

Additional bibliography: Rendle, Cat. Welw. Afr. Pl. 2: 100. 1899; Ruhl. in Engl., Pflanzenreich 13 (4-30): 66, 101, & 284. 1903; Thiselton-Dyer, Ind. Kew. Suppl. 2: 70. 1904; H. Lecomte, Bull. Soc. Bot. France 55: 647. 1909; Moldenke, Phytologia 17: 387. 1968.

ERIOCAULON ANGUSTIFOLIUM Körn.

Additional bibliography: Körn. in Mart., Fl. Bras. 3 (1): 494—496. 1863; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 1, 1: 877. 1893; Ruhl. in Engl., Pflanzenreich 13 (4-30): 42, 49, 57, & 284. 1903; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 2, 1: 877 (1946) and pr. 3, 1: 877. 1960; Moldenke, Phytologia 17: 387—388. 1968.

ERIOCAULON ANGUSTISEPALUM H. Hess

Additional & emended bibliography: H. Hess, Bericht. Schweitz. Bot. Gesell. 65: 160, fig. 7 & 8, & 170—174, pl. 9, fig. 2, 6, & 7. 1955; G. Taylor, Ind. Kew. Suppl. 12: 55. 1959; Moldenke, Phytologia 17: 388. 1968.

Illustrations: H. Hess, Bericht. Schweitz. Bot. Gesell. 65:

160, fig. 7 & 8, & pl. 9, fig. 2, 6, & 7. 1955.

**ERIOCAULON ANNAKENSE** H. Lecomte

Additional bibliography: H. Lecomte, *Not. Syst.* 2: 215. 1912; Prain, *Ind. Kew. Suppl.* 5, pr. 1, 97 (1921) and pr. 2, 97. 1960; Moldenke, *Phytologia* 17: 388. 1968.

**ERIOCAULON ANNUM** Milne-Redhead

Additional bibliography: Milne-Redhead in *Hook.*, *Icon. Pl.* 34: pl. 3389. 1939; Hall & Salisb., *Ind. Kew. Suppl.* 10: 86. 1947; Moldenke, *Phytologia* 17: 388. 1968.

**ERIOCAULON ANTUNESII** Engl. & Ruhl.

Additional bibliography: Ruhl. in *Engl.*, *Bot. Jahrb.* 27: 76. 1899; Ruhl. in *Engl.*, *Pflanzenreich* 13 (4-30): 61, 69, 70, & 284. 1903; Thiselet.-Dyer, *Ind. Kew. Suppl.* 2: 70. 1904; Moldenke, *Phytologia* 17: 388. 1968.

**ERIOCAULON APICULATUM** H. Lecomte

Synonymy: *Eriocaulon apiculatum* H. Lecomte & Moldenke ex Moldenke, *Phytologia* 3: 410-411. 1951.

Additional bibliography: H. Lecomte, *Bull. Soc. Bot. France* 55: 571 & 572. 1908; Prain, *Ind. Kew. Suppl.* 4, pr. 1, 82 (1913) and pr. 2, 82. 1938; G. Taylor, *Ind. Kew. Suppl.* 12: 55. 1959; Moldenke, *Phytologia* 17: 388. 1968.

Through an unfortunate oversight, I was not aware until now that Lecomte had actually validly published the binomial name which he had proposed and written on herbarium material of the type collection, Bernier 79, from Madagascar. The name must, therefore be accredited solely to him!

**ERIOCAULON AQUATILE** Körn.

Emended synonymy: *Paepalanthus aquatilis* Mart. ex Körn. in *Mart.*, *Fl. Bras.* 3 (1): 495, in syn. 1863.

Additional bibliography: Körn., *Linnaea* 27: 60. 1856; Körn. in *Mart.*, *Fl. Bras.* 3 (1): 495-496. 1863; Jacks. in *Hook. f. & Jacks.*, *Ind. Kew.*, pr. 1, 1: 877. 1893; Ruhl. in *Engl.*, *Pflanzenreich* 13 (4-30): 42, 49, 57, & 284. 1903; Jacks. in *Hook. f. & Jacks.*, *Ind. Kew.*, pr. 2, 1: 877 (1946) and pr. 3, 1: 877. 1960; Moldenke, *Phytologia* 17: 388-389. 1968.

**ERIOCAULON ARECHAVALETAE** Herter

Additional bibliography: *Arech.*, *Anal. Mus. Montevid.* 4 (1): 21. 1902; Prain, *Ind. Kew. Suppl.* 3: 69. 1908; Herter, *Rev. Sudam. Bot.* 2: 125. 1935; Hill & Salisb., *Ind. Kew. Suppl.* 10: 86. 1947; E. J. Salisb., *Ind. Kew. Suppl.* 11: 88. 1953; Moldenke, *Phytologia* 17: 389. 1968.

**ERIOCAULON ARENICOLA** Britton & Small

Additional bibliography: N. L. Britton, *Bull. Torrey Bot. Club* 44: 31. 1917; A. W. Hill, *Ind. Kew. Suppl.* 6: 78. 1926; León,



Fl. Cuba 1: 280. 1946; Moldenke, Phytologia 17: 389. 1968.

ERIOCAULON ARISTATUM H. Hess

Additional & emended bibliography: H. Hess, Bericht. Schweitz. Bot. Gesell. 65: 160, fig. 11 & 12, & 162--164, pl. 9, fig. 5. 1955; G. Taylor, Ind. Kew. Suppl. 12: 55. 1959; Moldenke, Phytologia 17: 389. 1968.

Illustrations: H. Hess, Bericht. Schweitz. Bot. Gesell. 65: 160, fig. 11 & 12, & pl. 9, fig. 5. 1955.

ERIOCAULON ATABAPENSE Moldenke

Additional bibliography: E. J. Salisb., Ind. Kew. Suppl. 11: 88. 1953; Moldenke, Phytologia 17: 389. 1968.

ERIOCAULON ATRATUM Körn.

Additional bibliography: Körn., Linnaea 27: 610. 1856; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 1, 1: 877. 1893; Ruhl. in Engl., Pflanzenreich 13 (4-30): 61, 69, & 284. 1903; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 2, 1: 877 (1946) and pr. 3, 1: 877. 1960; Moldenke, Phytologia 17: 389--390. 1968.

ERIOCAULON ATRATUM var. MAJOR Thwaites

Synonymy: Eriocaulon caulescens Hook. f. & Thoms. ex Thwaites, Pl. Zeyl. 341. 1864 [not E. caulescens Poir., 1813, nor Willd., 1863]. Eriocaulon philippo-coburgi Szyszyl. ex Wawra, Itin. Princ. S. Coburg 2: 96. 1888.

Additional bibliography: Wawra, Itin. Princ. S. Coburg 2: 96. 1888; Durand & Jacks., Ind. Kew. Suppl. 1, pr. 1, 158. 1902; Ruhl. in Engl., Pflanzenreich 13 (4-30): 68, 69, 284, & 285. 1903; Durand & Jacks., Ind. Kew. Suppl. 1, pr. 2, 158 (1941) and pr. 3, 158. 1959; Moldenke, Phytologia 17: 390. 1968.

The E. caulescens of Poiret is Syngonanthus caulescens (Poir.) Ruhl., while that accredited to Willdenow is Paepalanthus pilosus (H.B.K.) Kunth.

ERIOCAULON ATROIDES Satake

Additional & emended bibliography: Satake in Nakai, Icon. Pl. As. Orient. 2: 175, pl. 65. 1938; Hill & Salisb., Ind. Kew. Suppl. 10: 86. 1947; Moldenke, Phytologia 17: 390. 1968.

Illustrations: Satake in Nakai, Icon. Pl. As. Orient. 2: pl. 65. 1938.

ERIOCAULON ATRUM Nakai

Additional bibliography: Nakai in Fedde, Repert. Sp. Nov. 9: 466. 1911; Prain, Ind. Kew. Suppl. 5, pr. 1, 97. 1921; Masamune, Prel. Rep. Veg. Yakus. 51. 1929; Satake, Bull. Tokyo Sci. Mus. 4: [Rev. Jap. Erioc.] 57. 1940; Prain, Ind. Kew. Suppl. 5, pr. 2, 97. 1960; Moldenke, Phytologia 17: 450. 1968.

The E. atrum accredited to Masamune is E. hananoegoense Masamune.

**ERIOCAULON AUSTRALASICUM** (F. Muell.) Körn.

Additional synonymy: Eriocaulon australasicum Körn. in Mart., Fl. Bras. 3 (1): 475. 1863.

Additional bibliography: Körn. in Mart., Fl. Bras. 3 (1): 475. 1863; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 1, 1: 877 & 878. 1893; Ruhl. in Engl., Pflanzenreich 13 (4-30): 13, 104, 114, 284, & 285. 1903; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 2, 1: 877 & 878 (1946) and pr. 3, 1: 877 & 878. 1960; Moldenke, Phytologia 17: 451. 1968.

**ERIOCAULON AUSTRALE** R. Br.

Additional bibliography: F. Muell., Fragm. 1: 92. 1859; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 1, 1: 877. 1893; Ruhl. in Engl., Pflanzenreich 13 (4-30): 60, 62, 66, 281, & 284. 1903; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 2, 1: 877 (1946) and pr. 3, 1: 877. 1960; Moldenke, Phytologia 17: 391-393. 1968.

**ERIOCAULON BANANI** H. Lecomte

Bibliography: H. Lecomte, Bull. Soc. Bot. France 55: 645. 1909; Prain, Ind. Kew. Suppl. 4, pr. 1, 82 (1913) and pr. 2, 82. 1938.

The type of this species is A. Chevalier 524 from Soudan in Mali.

**ERIOCAULON BARBA-CAPRAE** Fyson

Additional & emended bibliography: Fyson, Journ. Indian Bot. 1: 50 (1919) and 2: 197. 1921; A. W. Hill, Ind. Kew. Suppl. 6: 78 (1926) and 7: 88. 1929; Moldenke, Phytologia 17: 393. 1968.

**ERIOCAULON BARBEYANUM** Ruhl.

Additional bibliography: Ruhl. in Engl., Pflanzenreich 13 (4-30): 61, 73, & 284. 1903; Prain, Ind. Kew. Suppl. 3: 69. 1908; Moldenke, Phytologia 17: 393. 1968.

**ERIOCAULON BASSACENSE** Moldenke

Additional bibliography: E. J. Salisb., Ind. Kew. Suppl. 11: 88. 1953; Moldenke, Phytologia 17: 393. 1968.

**ERIOCAULON BAURI** N. E. Br.

Synonymy: Eriocaulon baurii N. E. Br. apud Ruhl. in Engl., Pflanzenreich 13 (4-30): 63, 79, & 284. 1903.

Additional bibliography: N. E. Br. in Thiselt.-Dyer, Fl. Cap. 7: 54-55. 1897; Ruhl. in Engl., Pflanzenreich 13 (4-30): 63, 79, & 284. 1903; Thiselt.-Dyer, Ind. Kew. Suppl. 2: 70. 1904; Moldenke, Phytologia 17: 393. 1968.

Consultation of the original publication shows that Brown there proposed this binomial with only a single "i" in the specific portion. I see no valid reason for changing his spelling.

**ERIOCAULON BEAUVERDI** Moldenke

Synonymy: Eriocaulon helichrysoides var. giganteum Beauverd,

Bull. Herb. Boiss., sér. 2, 8: 283, fig. 9A. 1908. Eriocaulon giganteum Beauverd, Bull. Herb. Boiss., sér. 2, 8: 987. 1909.

Eriocaulon giganteum (Beauverd) Beauverd ex Moldenke, Phytologia 3: 183, in syn. 1949.

Additional bibliography: Beauverd, Bull. Herb. Boiss., sér. 2, 8: 283, fig. 9A. 1908; Prain, Ind. Kew. Suppl. 4, pr. 1, 82 (1913) and pr. 2, 82. 1938; E. J. Salisb., Ind. Kew. Suppl. 11: 88. 1953; Moldenke, Phytologia 17: 393. 1968.

<sup>1</sup>Illustrations: Beauverd, Bull. Herb. Boiss., sér. 2, 8: 283, fig. 9A. 1908.

#### ERIOCAULON BENTHAMII Kunth

Additional & emended bibliography: Benth., Pl. Hartw. 28. 1840; Schlecht., Linnaea 18: 434. 1844; Seem., Bot. Voy. Herald 221. 1854; Körn. in Mart., Fl. Bras. 3 (1): 490—492. 1963; Hemsl., Biol. Cent. Am. Bot. 3: 443. 1885; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 1, 1: 877. 1893; Ruhl. in Engl., Pflanzenreich 13 (4-30): 42, 48, 49, & 284. 1903; Moldenke, Phytologia 1: 311 & 316. 1939; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 2, 1: 877 (1946) and pr. 3, 1: 877. 1960; Moldenke, Phytologia 17: 393—394. 1968.

This taxon was first noted as "Eriocauli spec. nova?" by Benth. (1840). The Aschenborn 531, distributed as E. benthamii, is actually a cotype collection of E. ehrenbergianum Klotzsch.

#### ERIOCAULON BIFISTULOSUM Van Heurck & Muell.-Arg.

Emended synonymy: Eriocaulon fluitans J. G. Baker, Journ. Linn. Soc. Lond. Bot. 20: 277—278. 1883.

Additional & emended bibliography: J. G. Baker, Journ. Linn. Soc. Lond. Bot. 20: 277—278. 1883; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 1, 1: 877 & 878. 1893; Ruhl. in Engl., Pflanzenreich 13 (4-30): 18, 64, 90, 284, 285, & 286. 1903; Thiselt.-Dyer, Ind. Kew. Suppl. 2: 70. 1904; H. Lecante, Bull. Soc. Bot. France 55: 571 (1908) and 55: 647. 1909; A. W. Hill, Ind. Kew. Suppl. 8: 87. 1933; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 2, 1: 877 & 878 (1946) and pr. 3, 1: 877 & 878. 1960; Moldenke, Phytologia 17: 394—395. 1968.

Jackson (1893) regards E. fluitans J. G. Baker as conspecific with E. melanocephalum Kunth; the date "1893" given by me in some of my previous publications for this binomial is erroneous.

#### ERIOCAULON BILOBATUM Morong

Additional bibliography: Durand & Jacks., Ind. Kew. Suppl. 1, pr. 1, 158. 1902; Ruhl. in Engl., Pflanzenreich 13 (4-30): 21, 56, 113, 284, & 286. 1903; Durand & Jacks., Ind. Kew. Suppl. 1, pr. 2, 158 (1941) and pr. 3, 158. 1959; Moldenke, Phytologia 17: 395. 1968.

#### ERIOCAULON BLUMEI Körn.

Additional bibliography: Körn. in Miq., Ann. Mus. Bot. Lugd.

Bat. 3: 240. 1867; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 1, 1: 877. 1893; Ruhl. in Engl., Pflanzenreich 13 (4-30): 114 & 284. 1903; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 2, 1: 877 (1946) and pr. 3, 1: 877. 1960; Moldenke, Phytologia 17: 451 & 455. 1968.

It is of interest to note that Ruhland (1903) seems to recognize this taxon as valid in his text, but as invalid in his index.

#### ERIOCAULON BOMBAYANUM Ruhl.

Additional bibliography: Ruhl. in Engl., Pflanzenreich 13 (4-30): 102, 104, & 284. 1903; Prain, Ind. Kew. Suppl. 3: 69. 1903; Moldenke, Phytologia 17: 451. 1968.

#### ERIOCAULON BONGENSE Engl. & Ruhl.

Additional bibliography: Ruhl. in Engl., Bot. Jahrb. 27: 75. 1899; Ruhl. in Engl., Pflanzenreich 13 (4-30): 66, 100, & 284. 1903; Thiselt.-Dyer, Ind. Kew. Suppl. 2: 70. 1904; H. Lecomte, Bull. Soc. Bot. France 55: 647. 1909; Moldenke, Phytologia 17: 451. 1968.

#### ERIOCAULON BONI H. Lecomte

Additional bibliography: H. Lecomte, Journ. de Bot. 21: 89 & 108. 1908; Prain, Ind. Kew. Suppl. 4, pr. 1, 82 (1913) and pr. 2, 82. 1938; Moldenke, Phytologia 17: 451. 1968.

#### ERIOCAULON BRACHYPEPLON Körn.

Additional bibliography: Körn., Linnaea 27: 665. 1854; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 1, 1: 877. 1893; Ruhl. in Engl., Pflanzenreich 13 (4-30): 281 & 285. 1903; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 2, 1: 877 (1946) and pr. 3, 1: 877. 1960; Moldenke, Phytologia 17: 451. 1968.

#### ERIOCAULON BREVIFOLIUM Klotzsch

Additional bibliography: Klotzsch in Schomb., Faun. & Fl. Brit. Guian. 1116. 1848; Körn. in Mart., Fl. Bras. 3 (1): 496—497. 1863; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 1, 1: 877. 1893; Ruhl. in Engl., Pflanzenreich 13 (4-30): 42, 50, & 285. 1903; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 2, 1: 877 (1946) and pr. 3, 1: 877. 1960; Moldenke, Phytologia 17: 451—452. 1968.

The name hitherto employed for this taxon is invalid because of the Eriocaulon brevifolium Raf., Autikon Bot., pr. 1, 189 (1840), published validly 8 years before Klotzsch published his homonym. I, therefore, hereby propose the substitute name, Eriocaulon klotzschii Moldenke, for this taxon, honoring Johann Friedrich Klotzsch (1805—1860), who contributed considerably to our knowledge of this group of plants. The var. proliferum Moldenke, Mem. N. Y. Bot. Gard. 9: 278 (1957) will have to receive the new name, Eriocaulon klotzschii var. proliferum (Moldenke) Moldenke.

Lest there be any doubt about the legality of Rafinesque's binomial, I quote his original description of Eriocaulon brevi-

folium Raf. herewith, taken from his Autikon Bot., pr. 1, 189 (1840), reprinted without change in 1843 and listed in E. J. Salisb., Ind. Kew. Suppl. 11: 88 (1953): "fol. subul. brevissimis acutis, scapo gracilis contorto sulcato, basi vaginato, capit. globosis, bract. ovat. acut. glabris fulvis — South New Jersey and Texas, leaves uncial or less, scape 5 to 8 inches few ribs, heads small, fl. gray". The exact identity of Rafinesque's plant will be discussed by me later in this series of notes.

ERIOCAULON BREVIPEDUNCULATUM Merr.

Additional bibliography: Prain, Ind. Kew. Suppl. 4, pr. 1, 82 (1913) and pr. 2, 82. 1938; Moldenke, Phytologia 17: 452-453. 1968.

ERIOCAULON BREVICAPUM Körn.

Additional bibliography: Körn., Linnaea 27: 676. 1856; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 1, 1: 877. 1893; Ruhl. in Engl., Pflanzenreich 13 (4-30): 61, 70, & 285. 1903; H. Lecomte, Bull. Soc. Bot. France 55: 646. 1909; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 2, 1: 877 (1946) and pr. 3, 1: 877. 1960; Moldenke, Phytologia 17: 453. 1968.

ERIOCAULON BROMELIOIDEUM H. Lecomte

Synonymy: Eriocaulon bromelloideum H. Lecomte ex Moldenke, Known Geogr. Distrib. Erioc. 26 & 61, sphalm. 1946.

Additional bibliography: H. Lecomte, Journ. de Bot. 21: 107. 1908; Prain, Ind. Kew. Suppl. 4, pr. 1, 82 (1913) and pr. 2, 82. 1938; Moldenke, Phytologia 17: 453. 1968.

Unfortunately, due to an early typographic error, I have been misspelling the specific epithet of this species up until now. Consultation of the original publication has brought to light the correct spelling.

ERIOCAULON BROWNIANUM Mart.

Additional bibliography: Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 1, 1: 877. 1893; Ruhl. in Engl., Pflanzenreich 13 (4-30): 63, 84, 114, & 285. 1903; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 2, 1: 877 (1946) and pr. 3, 1: 877. 1960; Moldenke, Phytologia 17: 453-454. 1968.

ERIOCAULON BRUNONIS Britten

Additional bibliography: Britten, Journ. Bot. 38: 482. 1900; Ruhl. in Engl., Pflanzenreich 13 (4-30): 32, 38, & 285. 1903; Thiselt.-Dyer, Ind. Kew. Suppl. 2: 70. 1904; Moldenke, Phytologia 17: 454. 1968.

ERIOCAULON BUCHANANII Ruhl.

Additional & emended bibliography: Ruhl. in Thiselt.-Dyer, Fl. Cap. 7: 83. 1897; Ruhl. in Engl., Pflanzenreich 13 (4-30): 66, 101, & 285. 1903; Thiselt.-Dyer, Ind. Kew. Suppl. 2: 70. 1904; H. Lecomte, Bull. Soc. Bot. France 55: 647. 1909; H. Hess, Bericht.

Schweitz. Bot. Gesell. 65: 138, fig. 5 & 6, 145—147, & 161, pl. 8, fig. 7—9. 1955; Moldenke, Phytologia 17: 454—455. 1968.

Illustrations: H. Hess, Bericht. Schweitz. Bot. Gesell. 65: 138, fig. 5 & 6, & pl. 8, fig. 7—9. 1955.

Hess (1955) informs us that this species often grows in close association with E. gilgianum Ruhl.

#### ERIOCAULON BUEHGERIANUM Körn.

Additional bibliography: Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 1, 1: 877. 1893; Ruhl. in Engl., Pflanzenreich 13 (4-30): 65, 94, & 285. 1903; A. W. Hill, Ind. Kew. Suppl. 7: 89. 1929; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 2, 1: 877 (1946) and pr. 3, 1: 877. 1960; Moldenke, Phytologia 17: 455—456. 1968.

#### ERIOCAULON BURCHELLII Ruhl.

Additional bibliography: Ruhl. in Engl., Pflanzenreich 13 (4-30): 42, 50, & 285. 1903; Prain, Ind. Kew. Suppl. 3: 69. 1908; Moldenke, Phytologia 17: 456. 1968.

#### ERIOCAULON CAAGUAZUENSE Ruhl.

Additional & emended bibliography: Prain, Ind. Kew. Suppl. 4, pr. 1, 82 (1913) and pr. 2, 82. 1938; Moldenke, Phytologia 17: 456. 1968.

#### ERIOCAULON CABRALENSE Alv. Silv.

Additional bibliography: Alv. Silv., Arch. Mus. Nac. Rio Jan. 23: 162. 1921; A. W. Hill, Ind. Kew. Suppl. 7: 88. 1929; Moldenke, Phytologia 17: 456. 1968.

#### ERIOCAULON CAESIUM Griseb.

Additional bibliography: Griseb., Fl. Brit. W. Ind., pr. 1, 526. 1864; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 1, 1: 877. 1893; Ruhl. in Engl., Pflanzenreich 13 (4-30): 18, 64, 88, & 285. 1903; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 2, 1: 877 (1946) and pr. 3, 1: 877. 1960; Griseb., Fl. Brit. W. Ind., pr. 2, 526. 1963; Moldenke, Phytologia 17: 456. 1968.

#### ERIOCAULON CALLOSUM Raf.

Bibliography: Raf., Autikon Bot., pr. 1, 188 (1840) and pr. 2, 188. 1943; E. J. Salisb., Ind. Kew. Suppl. 11: 88. 1953.

Rafinesque's original description (1840) of this taxon is: "fol. gramineis semipedalibus latiusculis apice obt. callosis, scapis fol. longior basi vaginatis contortis sulcatis, capit. depressis, bract. subtrot. acutis vel obt. fulvis glabris, fl. cinereis -- Alabama, leaves broader at base, scape ultrapedal, heads small, fl. cinereous".

Of the probable identity of Rafinesque's plant more will be said by me later in this series of notes.

#### ERIOCAULON CANDIDUM Moldenke

Additional bibliography: E. J. Salisb., Ind. Kew. Suppl. 11:

88. 1953; Moldenke, *Phytologia* 17: 456. 1968.

ERIOCAULON CAPITULATUM Moldenke

Additional bibliography: E. J. Salisb., *Ind. Kew. Suppl.* 11: 88. 1953; Moldenke, *Phytologia* 17: 456. 1968.

ERIOCAULON CARSONI F. Muell.

Additional & emended bibliography: F. Muell., *Proc. Linn. Soc. New S. Wales*, ser. 2, 5: 250. 1890; Durand & Jacks., *Ind. Kew. Suppl.* 1, pr. 1, 158. 1902; Ruhl. in *Engl., Pflanzenreich* 13 (4-30): 65, 98, 281, & 285. 1903; Thiselt.-Dyer, *Ind. Kew. Suppl.* 2: 70. 1904; Prain, *Ind. Kew. Suppl.* 3: 70. 1908; Durand & Jacks., *Ind. Kew. Suppl.* 1, pr. 2, 158 (1941) and pr. 3, 158. 1959; Moldenke, *Phytologia* 17: 456--457. 1968.

ERIOCAULON CAULIFERUM Mak.

Additional bibliography: Prain, *Ind. Kew. Suppl.* 4, pr. 1, 82 (1913) and pr. 2, 82. 1938; Moldenke, *Phytologia* 17: 457--458. 1968.

ERIOCAULON CELEBICUM Van Royen

Bibliography: Van Royen, *Blumea* 10: 127. 1960; G. Taylor, *Ind. Kew. Suppl.* 13: 52. 1966.

Nothing is known to me about this taxon except what is given in the bibliography above. It is supposedly endemic to Celebes.

ERIOCAULON CEYLANICUM Körn.

Additional synonymy: Eriocaulon subcaulescens Hook. f., *Fl. Brit. Ind.* 6: 573. 1893. Eriocaulon subacaulescens Hook. ex Moldenke, *Résumé* 293, in *syn. sphalm.* 1959.

Additional bibliography: Körn., *Linnaea* 27: 667. 1856; Jacks. in Hook. f. & Jacks., *Ind. Kew.*, pr. 1, 1: 877. 1893; Durand & Jacks., *Ind. Kew. Suppl.* 1, pr. 1, 158. 1902; Ruhl. in *Engl., Pflanzenreich* 13 (4-30): 64, 68, 87, & 285. 1903; Durand & Jacks., *Ind. Kew. Suppl.* 1, pr. 2, 158. 1941; Jacks. in Hook. f. & Jacks., *Ind. Kew.*, pr. 2, 1: 877. 1946; Durand & Jacks., *Ind. Kew. Suppl.* 1, pr. 3, 158. 1959; Jacks. in Hook. f. & Jacks., *Ind. Kew.*, pr. 3, 1: 877. 1960; Moldenke, *Phytologia* 17: 458. 1968.

ERIOCAULON CHINOROSSICUM Komarov

Synonymy: Eriocaulon chinorossicum Lom ex Moldenke, *Known Geogr. Distrib. Erioc.* 61, *sphalm.* 1946.

Additional bibliography: Komarov, *Bull. Jard. Bot. Pétersb.* 16: 156. 1916; A. W. Hill, *Ind. Kew. Suppl.* 6: 78. 1926; Moldenke, *Phytologia* 17: 458. 1968.

Lamentably, due to a typographic error in 1946, I have been misaccrediting this binomial until now!

ERIOCAULON CHRISTOPHERI Fyson

Additional bibliography: Fyson, *Kew Bull. Misc. Inf.* 1914: 330. 1914; Prain, *Ind. Kew. Suppl.* 5, pr. 1, 97 (1921) and pr.

2, 97. 1960; Moldenke, *Phytologia* 17: 458 & 463. 1968.

*ERIOCAULON CILIIPETALUM* H. Hess

Additional bibliography: G. Taylor, *Ind. Kew. Suppl.* 12: 55. 1959; Moldenke, *Phytologia* 17: 458. 1968.

*ERIOCAULON CINEREUM* R. Br.

Additional synonymy: *Eriocaulon ciliiflorum* F. Muell., *Fragm.* 1: 95-96. 1859. *Eriocaulon sieboldianum* Sieb. & Zucc. ex H. Lecomte, *Bull. Soc. Bot. France* 55: 648, sphalm. 1909.

Additional & emended bibliography: R. Br., *Prodr. Fl. Nov. Holl.* 1: 254. 1810; Kunth, *Enum. Pl.* 3: 552 & 571. 1841; Jacks. in Hook. f. & Jacks., *Ind. Kew.*, pr. 1, 1: 877-879. 1893; N. E. Br. in Thiseit.-Dyer, *Fl. Trop. Afr.* 8: 259. 1901; Ruhl. in Engl., *Pflanzenreich* 13 (4-30): 111, 285, & 286, fig. 112. 1903; Prain, *Ind. Kew. Suppl.* 3: 70. 1908; H. Lecomte, *Bull. Soc. Bot. France* 55: 648. 1909; Fyson, *Journ. Indian Bot.* 2: 313. 1921; Haines, *Bot. Bihar & Orissa* 6: 1066 & 1068. 1924; S. Sasaki, *List Pl. Formos.* 99. 1928; A. W. Hill, *Ind. Kew. Suppl.* 7: 89. 1929; C. E. C. Fischer in Gamble, *Fl. Presid. Madras* 9: 1611 & 1619. 1931; Jacks. in Hook. f. & Jacks., *Ind. Kew.*, pr. 2, 1: 877-879. 1946; Moldenke, *Phytologia* 3: 325. 1950; Jacks. in Hook. f. & Jacks., *Ind. Kew.*, pr. 3, 1: 877-879. 1960; Moldenke, *Phytologia* 17: 454 & 458-462. 1968.

Another vernacular name recorded for this plant is "takasago-hosikusa".

The *E. nitidum* Buch.-Ham., cited in the synonymy of this taxon previously, is erroneously reduced to *E. sexangulare* L. by Jackson (1893). The *E. nitidum* of Bongard is *Syngonanthus nitidus* (Bong.) Ruhl., while the *E. cinereum* Buch.-Ham., also cited as *E. cinereum* Hamilt., is *E. hamiltonianum* Mart.

Additional & emended citations: CHINA: Kwangtung: Samson 256 [127] (D-824275). FORMOSA: Tanaka & Shimada 13574 (D-697328).

*ERIOCAULON CIPOENSE* Alv. Silv.

Additional bibliography: Alv. Silv., *Fl. Serr. Min.* 33. 1908; A. W. Hill, *Ind. Kew. Suppl.* 8: 87. 1933; Moldenke, *Phytologia* 17: 463. 1968.

*ERIOCAULON COLLETTII* Hook. f.

Additional bibliography: Hook. f., *Fl. Brit. Ind.* 6: 275. 1893; Durand & Jacks., *Ind. Kew. Suppl.* 1, pr. 1, 158. 1902; Ruhl. in Engl., *Pflanzenreich* 13 (4-30): 114 & 285. 1903; Durand & Jacks., *Ind. Kew. Suppl.* 1, pr. 2, 158 (1941) and pr. 3, 158. 1959; Moldenke, *Phytologia* 17: 463. 1968.

*ERIOCAULON COLLINUM* Hook. f.

Synonymy: *Eriocaulon dianae* var. *triloboides* Fyson, *Journ. Indian Bot.* 2: 260. 1921. *Eriocaulon luzulifolium* f. *nigrescens* Ruhl. ex Moldenke, *Bull. Jard. Bot. Brux.* 27: 139, in syn. 1957.



Additional bibliography: Hook. f., Fl. Brit. Ind. 6: 584. 1893; Durand & Jacks., Ind. Kew. Suppl. 1, pr. 1, 158. 1902; Ruhl. in Engl., Pflanzenreich 13 (4-30): 64, 87, & 285. 1903; Haines, Bot. Bihar & Orissa 6: 1066 & 1069. 1924; C. E. C. Fischer, Kew Bull. Misc. Inf. 1931: 261. 1931; C. E. C. Fischer in Gamble, Fl. Presid. Madras 9: 1615--1616 & 1620. 1931; Durand & Jacks., Ind. Kew. Suppl. 1, pr. 2, 158. 1941; Koyama, Philip. Journ. Sci. Bot. 84: 370. 1956; Durand & Jacks., Ind. Kew. Suppl. 1, pr. 3, 158. 1959; Moldenke, Phytologia 17: 458 & 463. 1968.

Fyson's original description (1921) of his E. dianae var. triloboides is "Capitula nigra aut nigrescentia globosa. Plate 15. Khandala to Wynaad. Leaves as in var. a [=typica]. Heads globose, dark almost black, distinguishable only by the third female sepal being linear from E. trilobum Ham. This variety has in consequence frequently been identified as that species. See p. 139, fig. 3, which is this plant, but wrongly named E. trilobum on p. 150, also see p. 206."

Koyama (1956) says that E. hayatanum Koyama, from Annam, "is distinguishable from E. collinum by completely free sepals of male flowers, female sepals emarginate at apex and much longer sheaths at the base of peduncles".

The Gopalaswamy s.n. [Castle Rock, 7-10-51], distributed as E. collinum, is actually E. dianae var. longibracteatum Fyson.

#### ERIOCAULON COMPRESSUM Lam.

Additional & emended synonymy: Eriocaulon filiformis Raf., Atl. Journ., pr. 1, 21. 1832 [not E. filiforme Bong., 1831]. Eriocaulon gnaphaloides Schlecht., Linnaea 18: 435. 1844. Eriocaulon cephalotes Poir. apud Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 1, 1: 877, in syn. 1893. Eriocaulon filiforme Raf. apud Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 1, 1: 878. 1893. Eriocaulon gnaphaloides Michx. ex Moldenke, Phytologia 3: 186, in syn. 1949.

Additional bibliography: Raf., Atl. Journ., pr. 1, 121. 1832; Raf., Autikon Bot., pr. 1, 189. 1840; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 1, 1: 877 & 878. 1893; Ruhl. in Engl., Pflanzenreich 13 (4-30): 13, 31, 34, 35, & 285. 1903; Raf., Autikon Bot., pr. 2, 189. 1943; Raf., Atl. Journ., pr. 2, 121. 1946; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 2, 1: 877 & 878 (1946) and pr. 2, 877 & 878. 1960; Moldenke, Phytologia 17: 463--464, fig. 2. 1968.

On pure sand this species is a common pioneer, but may frequently be seen where the water is a few inches or to 30 inches deep. Eventually accumulation of organic matter changes the bottom substratum. Rooted aquatics and then marsh plants move in and eliminate the Eriocaulon.

Cooley & Monachino found the plant growing on a wet prairie, in water 0.5 m. deep, describing the heads as white, the petals each with a black spot, and the sepals black with a fringe of white,

blooming in March. Cooley & Eaton found it in a wet ditch of a hammock, and describe the bracts as blackish, the flowers white-bearded, sometimes ciliate.

The R. M. Harper 21146, cited below, was erroneously cited as E. lineare Small by me in a previous installment of these notes. The Jansson s.n. [Aug. 26, 1950], also cited below, is a mixture with E. decangulare L. mounted in such a way that the E. decangulare flowering scapes appear to be issuing from an E. compressum leaf-rosette!

It should be noted here that the E. filiforme Bong., cited in the synonymy above, is a synonym of Syngonanthus nitens (Bong.) Ruhl.

Kral (1966) gives the following very interesting notes about this species: "Sands or sandy peats of shallow pineland ponds, lakeshores, seepage bogs, savannas, ditches or low flatwoods, coastal plain, eastern Texas, e. to Florida and n. to New Jersey. Type. South Carolina, Fraser. (At P?). In stature and habit E. compressum somewhat resembles E. decangulare, a tall summer and fall flowering Eriocaulon, but differs from it in having a more spongy foliage, softer heads, a less-hairy receptacle, and darker coloured bracts the tips of which are acute or rounded rather than acuminate. In fact, it is closest in appearance to a shorter plant, E. lineare, which also has soft, white, usually hemispherical heads, but differs from that species in having larger, often unisexual (rather than bisexual) heads, the receptacular surfaces of which have at least sparse hairs (those of E. lineare are smooth). Also, the surface of the seed of E. compressum is smoothish while that of the seed of E. lineare is indistinctly cancellate, sometimes papillate. This is perhaps the showiest of all the Eriocaulaceae of the southeastern United States, in springtime so abundantly decorating the shallow waters of pinelands as to appear like a shower of white confetti."

Material has been abundantly misidentified and distributed in herbaria as E. decangulare L., E. lineare Small, E. septangulare With., E. texense Körn., and Lachnocaulon glabrum Körn. On the other hand, the Demaree 28664, R. K. Godfrey 53139, Jacob 1278, and Kral & Godfrey 2342, distributed as E. compressum, are actually E. compressum var. harperi Moldenke, A. A. Heller 181, Morong s.n. [Aug. 11, 1873], W. F. Rhoades s.n. [Abbeville, July & Aug. 1925], and P. O. Schallert s.n. [Nakina, 6/25/34] are E. decangulare L., W. M. Canby s.n. [Magnolia, April 1858], R. K. Godfrey 53684, and S. Taylor 127 are E. lineare Small, Hueske s.n. [White Lake, 5/24/47] is E. pellucidum Michx., and M. O. Helms 1011 and Olds s.n. [Montgomery, 3.20.94] are Lachnocaulon anceps (Walt.) Morong.

Additional citations: NEW JERSEY: Atlantic Co.: G. W. Bassett s.n. [Hammonton, May 27, 1923] (Mi, Ws); C. A. Gross s.n. [Cedar Lake, June 3, 1891] (Dt); H. N. Moldenke 22273 (Ac); Williamson

s.n. [Aug. 1905] (S). Burlington Co.: Herb. Durand s.n. (Ms--15473); F. J. Hermann 4478 (Mi, Ok--14318); M. A. Johnson s.n. [Chatsworth, 5 June 1934] (S); Lawrence & Dress 273 (Ca--805289); G. B. Rossbach s.n. [6/18/48] (We). Ocean Co.: Ewer 1066 (Ms--43547); Jansson s.n. [Aug. 26, 1950] (Go); MacElwee 658 (S). County undetermined: C. F. Austin s.n. [Oct. 1862] (N); W. M. Canby s.n. [Damp pine barrens, 1859] (Ws); Treat s.n. [Pine barrens] (Dt). NORTH CAROLINA: Bladen Co.: C. L. Rodgers 155c (Hi--34475). Brunswick Co.: Bell & Kim 281 (Hi--199268). Columbus Co.: Godfrey & White 7104 (Ca--741130, Mi, S); A. E. Radford 4215 (Hi--48380). Harnett Co.: A. E. Radford 4014 (Hi--48379). New Hanover Co.: W. M. Canby s.n. [prope Wilmington, 1873] (Ca--405216); Godfrey & White 7083 (Ca--741350, Mi, S); A. E. Radford 4279 (Hi--48381), 4377 (Hi--48383), 5155 (Hi--50212). Onslow Co.: Ashe s.n. [May 20, 1899] (Hi); Radford & Stewart 1213 (Hi--23656). Robeson Co.: Ahles & Ramseur 23819 (Hi--97212). Scotland Co.: Ahles & Hammond 24763 (Hi--97213), 24942 (Hi--119267); Radford & Stewart 328 (Hi--16761). SOUTH CAROLINA: Allendale Co.: C. R. Bell 2643 (Hi--97210). Barnwell Co.: Batson & Kelley s.n. [Apr 13, 1952] (Hi--140166), s.n. [Apr. 20, 1953] (Hi--140167, Hi--140168, Hi--140169, Hi--140170). Charleston Co.: Cabanis s.n. [around Pinebarren Ponds near Charleston] (B). Darlington Co.: W. C. Coker s.n. [4/3/1910] (Hi--77049), s.n. [5/7/10] (Hi), s.n. [June 27, 1931] (Hi--21487); J. B. Norton s.n. [Apr. 9, 1921] (Hi, Hi); B. E. Smith s.n. [April 21, 1932] (Hi--21442). Dorchester Co.: C. G. Du Bois s.n. [Apr. 11, 1889] (Ws). Georgetown Co.: Radford & Stewart 1030 (Ca--978012, Hi--23497). Marion Co.: C. R. Bell 7370 (Hi--97211). Williamsburg Co.: A. E. Radford 21268 (Hi--97167). County undetermined: L'Herminier s.n. [Carolina meridionale] (B). GEORGIA: Early Co.: R. F. Thorne 3294 (N), 3477 (Mi, Vi); Thorne & Muenscher 2467 (We). Miller Co.: Thorne & Harper 3171 (Ca--906391). Montgomery Co.: R. M. Harper 2146 (Ms--15476, N). Sumter Co.: R. M. Harper 2219 (Ms--15477), 2279 (B). Ware Co.: Ward, Ward, & Godfrey 1307 (Hi--181986). Sapelo Island [McIntosh Co.]: Adams, Connell, & Duncan 20000 (Mi). FLORIDA: Alachua Co.: "B. T. Y." 421 (Hi--203783). Collier Co.: A. R. Moldenke 1379 (Ac, Rf, Ws). Dade Co.: A. A. Eaton 485 (Rf). Duval Co.: Curtiss 3017 (Ca--2412, Ms--15466, Ms--15468, Vi), 4585 (Ca--115168, Mm--7961), 6126 (Hi--77051, S), s.n. [Jacksonville] (Ws); Ruth s.n. [May 1893] (Ut--798b). Escambia Co.: Fassett 21142 (Ws); R. K. Godfrey 54595 (N); Goodale s.n. [24 March 1933] (Ms--69827), s.n. [31 March 1933] (Ms--69824). Gulf Co.: A. W. Chapman s.n. [Wewahitchka] (Dt). Hillsborough Co.: Cooley & Eaton 5781 (N). Holmes Co.: R. K. Godfrey

56395 (Ca--112969); Kral & Redfearn 2895 (Hi--111832). Jackson Co.: R. K. Godfrey 54530 (Hi--157560, N). Lake Co.: G. V. Nash 92 (Ca--115165, Mm--7963, Ms--15469). Lee Co.: R. K. Godfrey 53104 (Hi--157559); H. N. Moldenke 689a (S). Leon Co.: R. K. Godfrey 53104 (N). Liberty Co.: A. R. Moldenke 281 (S); Reese 1111 (Hi--193468). Martin Co.: W. F. Buchanan s.n. [Stuart, March 23, 1938] (Ok). Okeechobee Co.: J. A. Harris C.17908 (Ca--610047). Orange Co.: A. S. Hitchcock s.n. [Winter Park] (Dt); A. M. Huger 9 (S). Osceola Co.: G. Ean s.n. [25.3.1951] (S). Palm Beach Co.: A. R. Moldenke 1379 (B); Small, DeWinkeler, & Rane 9815 (S). Pasco Co.: Cooley & Monachino 5585 (N). Pinellas Co.: M. S. Bebb s.n. [Clearwater, 1894] (Ok). Polk Co.: McFarlin 4280 (Mi), 4322 (Mi), 4491 (Mi); Topping 2611 (Mi). Saint Johns Co.: J. D. Smith s.n. [Mch. 4, 1882] (Ca--189386). Santa Rosa Co.: Fassett 21136 (Ws). Seminole Co.: H. C. Beardslee s.n. [Near Altemonte Springs, April 1939] (Ca--841785). Volusia Co.: H. C. Beardslee 1 (Ca--841784). Wakulla Co.: R. K. Godfrey 53134 (Hi--157558, N); Redfearn & Kral 2443 (N). Walton Co.: Kral 19844 (N). Robert's Island [Dade Co.]: J. K. Small 7386 (S). County undetermined: Chickering s.n. (Ca--2444); Curtiss s.n. [Pine barren swamps, July 188-] (Hi--77043), s.n. (Mm--7962); Goodale 69827 [Ensley] (Ok); Herb. Amherst Coll. s.n. (Ms--15473). ALABAMA: Escambia Co.: Ahles 7255 (Ur). Mobile Co.: Herb. Jewett 3007 (Dt); Kell & Dittman s.n. [29 April 1951] (Ac). MISSISSIPPI: George Co.: Ahles & Bell 7688 (Ur). County undetermined: Hilgard s.n. [seacoast, May 1859] (Dt). LOUISIANA: Saint Tammany Par.: Kral 16508 (N). TEXAS: Austin Co.: Tharp s.n. [Bellville, 5/4/40] (Ca--841806). Hardin Co.: R. L. Crockett 6697 (Ld); E. J. Palmer 9563 (S). Henderson Co.: O. Sanders 132 (Mi, Rf). Houston Co.: E. J. Palmer 13185 (Ws). LOCALITY OF COLLECTION UNDETERMINED: Boott s.n. (Ws); Hooker s.n. [S. States] (B); Palisot de Beauvois s.n. [America septentr.] (B).

ERIOCAULON COMPRESSUM var. HARPERI Moldenke

Additional bibliography: Moldenke, Bull. Jard. Bot. Brux. 27: 141. 1957; Moldenke, Résumé 11, 12, 14, 23, & 480. 1959; Moldenke, Résumé Suppl. 3: 2 (1962) and 16: 1 & 2. 1968.

Recent collectors have found this variety growing in pinebarrens, open white gravel bogs, moist shallow broad ditches, sphagnous peat of hillside bogs, sphagnous sandy peaty soil of flatwoods areas, longleaf pine hills, heavy sandy peaty clay of hillside bogs, and *Sarracenia* bogs. Kral reports it "very abundant in sphagnous *Sarracenia* type boggy areas in flatwoods", while Kral & Godfrey report it "common on moist open sands of savanna". They have collected it in flower and fruit in April and August. Kral describes the heads as "snowy white".

Material has been misidentified and distributed in herbaria as E. compressum Lam. and E. decangulare L. The Lighthipe s.n. [Tom's River, Sept. 1, 1890] is actually a mixture with E. decangulare L.

Additional citations: NEW JERSEY: Ocean Co.: Lighthipe s.n. [Tom's River, Sept. 1, 1890] (Ca--841790). MARYLAND: Prince Georges Co.: S. F. Blake 10665 (Ws). GEORGIA: R. M. Harper 1395 (B). FLORIDA: Bay Co.: Kral 19800 (N). Escambia Co.: Kral 19876 (N), 19880 (N). Franklin Co.: R. K. Godfrey 53139 (Hi--157557, N). Lee Co.: H. N. Moldenke 689 (S). Wakulla Co.: Kral & Godfrey 2342 (Hi--193978, N); H. N. Moldenke 1123 (S). Walton Co.: Kral 19808 (N). ALABAMA: Mobile Co.: Kral 26526 (N). MISSISSIPPI: George Co.: Kral 19854 (N). Jackson Co.: Demaree 28664 (Ok, St); Jacob 1278 (Hi--196310). LOCALITY OF COLLECTION UNDETERMINED: Herb. Soc. Nat. Hist. Boston s.n. (Dt).

#### ERIOCAULON COMPTONII Rendle

Additional bibliography: Rendle, Journ. Linn. Soc. Lond. Bot. 45: 259. 1921; A. W. Hill, Ind. Kew. Suppl. 7: 88. 1929; Moldenke, Known Geogr. Distrib. Erioc. 27 & 61. 1946; Moldenke, Résumé 205 & 480. 1959.

#### ERIOCAULON CONCRETUM F. Muell.

Additional bibliography: F. Muell., Fragm. 1: 92--93. 1859; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 1, 1: 878. 1893; Ruhl. in Engl., Pflanzenreich 13 (4-30): 114 & 285. 1903; Moldenke, Known Geogr. Distrib. Erioc. 27 & 33. 1946; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 2, 1: 878 (1946) and pr. 3, 1: 878. 1960; Moldenke, Résumé 208 & 480. 1959.

#### ERIOCAULON CONGOLENSE Moldenke

Additional bibliography: Moldenke, Résumé Suppl. 4: 7. 1962; Moldenke, Phytologia 8: 386. 1962; Hocking, Excerpt. Bot. A.6: 455. 1963; Moldenke, Biol. Abstr. 42: 1517. 1963; Anon., Assoc. Etud. Tax. Fl. Afr. Trop. Index 1962: 29. 1963.

Citations: CONGO LEOPOLDVILLE: Monod 11642 (An--type, Z--isotype).

#### ERIOCAULON CONICUM (Fyson) C. E. C. Fischer

Synonymy: Eriocaulon dianae var. conica Fyson, Journ. Indian Bot. Soc. 2: 260. 1921. Eriocaulon conicum Fisch. apud Razi, Journ. Mysore Univ. 7 (4): 77. 1946. Eriocaulon conicum Hook. f. ex Razi, Proc. Nat. Inst. Sci. India 21 B (2): 82. 1955.

Bibliography: Fyson, Journ. Indian Bot. Soc. 2: 260. 1921; C. E. C. Fischer, Kew Bull. Misc. Inf. 1931: 261. 1931; C. E. C. Fischer in Gamble, Fl. Presid. Madras 9: 1616--1617 & 1620. 1931; A. W. Hill, Ind. Kew. Suppl. 9: 105. 1938; Razi, Journ. Mysore Univ. 7 (4): 77. 1946; Moldenke, Known Geogr. Distrib. Erioc. 23 & 61. 1946; Moldenke, Phytologia 3: 189 (1949) and 3: 322. 1950;

Razi, Journ. Mysore Univ. B 14 (10): 460. 1955; Razi, Contrib. Bot. 40: 92. 1955; Razi, Proc. Nat. Inst. Sci. India 21 B (2): 82. 1955; Moldenke, Résumé 161, 287, & 480. 1959; Razi, Rec. Bot. Surv. India 18: 19. 1959; Moldenke, Résumé Suppl. 3: 17 & 31. 1962; Thanikaimoni, Pollen & Spores 7: 184. 1965.

Fyson's original description of this taxon is "Capitula conica, basi truncata, folia linearia. Mysore to Wyanaad. Heads conical with horizontal base, very black, because nearly glabrous: clearly connected with var. f. This plant is possibly E. Rouscianum Steud." Razi (1959) cites Gamble's Fl. Madras, cited by me in the bibliography above. He records the species from Andhra, Madras, and Mysore.

The Ramaswamy 1042 & 2267, distributed as E. conicum, actually are E. odoratum Dalz., while Ramaswamy 2108 is E. oliveri Fyson and his 1830 is E. hamiltonianum var. minimum Fyson

#### ERIOCAULON CONIFERUM Herzog

Additional bibliography: Lützelburg, Estud. Bot. Nordéste 3: 147 & 150. 1923; Herzog in Fedde, Repert. Sp. Nov. 20: 82. 1924; A. W. Hill, Ind. Kew. Suppl. 7: 88. 1929; Moldenke, Known Geogr. Distrib. Erioc. 7 & 33. 1946; Moldenke, Phytologia 3: 322. 1950; Moldenke, Résumé 88 & 480. 1959.

Additional citations: BRAZIL: Goiás: Lützelburg 455 [Macbride photos 18685] (N--photo of cotype, W--photo of cotype).

#### ERIOCAULON CRASSISCAPUM Bong.

Synonymy: Eriocaulon molle Mart. ex Körn. in Mart., Fl. Bras. 3 (1): 487, in syn. 1863 [not E. molle Steud., 1855]. Eriocaulon crassiscapum Bonz. ex Rennó, Levant. Herb. Inst. Agron. 68, spahlm. 1960.

Bibliography: Bong., Mém. Acad. Imp. Sci. St.-Pétersb., sér. 6, 1: 628, pl. 44. 1831; Kunth, Enum. Pl. 3: 574 & 575. 1841; Steud., Syn. Fl. Glum. 2 (Cyp.) 2: 269. 1855; Körn. in Mart., Fl. Bras. 3 (1): 486--487. 1863; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 1, 1: 878. 1893; Ruhl. in Engl., Pflanzenreich 13 (4-30): 7, 8, 17, 42, 52, 285, & 286, fig. 2 E-G, & 7. 1903; Ruhl. in Engl. & Prantl, Nat. Pflanzenfam., ed. 2, 15a: fig. 17. 1930; Castell. in Descole, Gen. Sp. Pl. Argent. 3: 87, pl. 17. 1945; Abbiatti, Revist. Mus. La Plata Bot. 6 (26): 329--330, pl. 2 (1), fig. 4 (d) & 6. 1946; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 2, 1: 878. 1946; Moldenke, Known Geogr. Distrib. Erioc. 7, 33, & 37. 1946; Moldenke, Phytologia 3: 189 (1949) and 3: 322. 1950; Angely, Fl. Paran. 10: 14. 1957; Moldenke, Résumé 88, 123, & 290. 1959; Angely, Fl. Paran. 16: 51. 1960; Rennó, Levant. Herb. Inst. Agron. 68. 1960; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 3, 1: 878. 1960; Angely, Fl. Paran. 17: 24. 1961; Moldenke, Résumé Suppl. 3: 31. 1962.

Illustrations: Ruhl. in Engl., Pflanzenreich 13 (4-30): 7 & 52, fig. 2 E-g & 7. 1903; Ruhl. in Engl. & Prantl, Nat. Pflanzenfam., ed. 2, 15a: fig. 17. 1930; Castell. in Descole, Gen.

Sp. Pl. Argent. 3: pl. 17. 1945; Abbiatti, Revist. Mus. La Plata Bot. 6 (26): 330, pl. 2 (1), fig. 4 (d) & 6. 1946.

The E. molle Steud., referred to in the bibliography above, is a synonym of Paepalanthus plumosus (Bong.) Körn. It should be noted that E. molle Mart. is based on Luschnath 40 [Martius 890] from Caxoeiro do Campo, Minas Gerais, Brazil.

Kunth (1841) describes E. crassiscapum as follows: "acaule; foliis vagina brevioribus, lanceolatis, acuminatis, reticulatis, glabris; pedunculo crassiusculo, fistuloso, glabro; vagina laxa, bifida. Bong. -- In paludibus inter as Prados et Barbacena." He tells us that the "pl. 44" of Bongard's work (1831) was never published. I have personally verified that it does not occur in the New York Botanical Garden's copy of the work. It is, of course, possible that the original drawings are preserved in Leningrad.

Our plant has been collected in marshes, flowering in February. Material has been misidentified and distributed in herbaria under the name E. flagellare Guill. The Riedel 1038, cited below, is a mixture with Leiothrix curvifolia (Bong.) Ruhl. and was identified by Pulle as E. curvifolia var. lanuginosa (Bong.) Ruhl.

Abbiatti (1946) thinks that the Löfgren collection, cited below as from São Paulo, may actually have come from Minas Gerais [the locality of collection is "Corrego Alegre"]. She cites also Muniez s.n. [Loreto, Sept. 1919] from Misiones, Argentina, and the following specimens from São Paulo, Brazil: Brade 5536 [Herb. Inst. Bot. S. Paulo 6581], Duarte 37 [Herb. Inst. Bot. S. Paulo 10176], F. C. Hoehne s.n. [Butantan, 27-VII-1917; Herb. Inst. Bot. S. Paulo 368], and Collector undesignated s.n. [Cantareira, 8-IV-1901; Herb. Com. Geogr. & Geol. 74; Herb. Inst. Bot. S. Paulo 10177].

Additional citations: BRAZIL: Minas Gerais: Burchell 5701 (Br); P. Clausen 8 (Br), 17 (P), 1180 (E), s.n. (Br); Lindberg 570 (Br, S); Luschnath 40 [Martius 890] (Br, M, N--photo, Z--photo), s.n. [Campos Bravos, Julio 1833] (Br); Magalhães Gomes 4301 [Herb. Jard. Bot. Belo Horiz. 26714] (N); Mosén 1738 (S); Regnell III. 1269 [22/11/1864] (S, S, W--200762), III.1269 [26/11/1864] (S); L. Riedel 1038, in part (Ut--336). Paraná: Dusén 10493 (S, S); Hatschbach 2861 (N). São Paulo: Brade 5536 (S); Eiten & Eiten 1749 (N); Löfgren s.n. [Herb. Inst. Bot. S. Paulo 10175; Herb. Com. Geogr. & Geol. 3576] (N); L. Riedel 1481 (S, Ut--328). State undetermined: Glaziou 17344 (Br).

#### ERIOCAULON CRISTATUM Mart.

Bibliography: Wall., Plant. As. Rar. 3: 28. 1832; Wall., Numer. List 207. 1832; Kunth, Enum. Pl. 3: 559--560. 1841; Körn., Linnaea 27: 607. 1856; Hook. f., Fl. Brit. Ind. 6: 574. 1893; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 1, 1: 878. 1893; Ruhl. in Engl., Pflanzenreich 13 (4-30): 63, 84, & 285. 1903; Fyson, Journ. Indian

Bot. Soc. 2: 312, pl. 31. 1921; Satake, Bull. Tokyo Sci. Mus. 4: [Rev. Jap. Erioc.] 64. 1940; Moldenke, Known Geogr. Distrib. Erioc. 23, 25, 26, 33, & 61. 1946; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 2, 1: 878. 1946; Moldenke, Phytologia 3: 189. 1949; Moldenke, Résumé 159, 162, 169, 173, 174, 180, 287, 291, & 480. 1959; Moldenke, Résumé Suppl. 1: 11. 1959; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 3, 1: 878. 1960; Thanikaimoni, Pollen & Spores 7: 183 & 184, tab. 1. 1965; Moldenke, Résumé Suppl. 15: 8. 1967; Moldenke, Phytologia 17: 454. 1968.

Illustrations: Fyson, Journ. Indian Bot. Soc. 2: pl. 31. 1921; Thanikaimoni, Pollen & Spores 7: 183, tab. 1. 1965.

Fyson (1921) describes this species as follows: "Stem short or up to 1 in. Leaves linear to 6 in. by 1/6 in., many nerved, not much enlarged at the base. Scapes 6-15 in. Heads 1/3 in. Involucre black or white. Floral bracts deltoid. Receptacle not very hairy." He gives its distribution as "Assam; Khasia; Bengal" and comments that "Some of the heads have a fringe of protruding male petals as in *E. longicuspis*, but because of the broad leaf-bases I am inclined to regard this as more nearly related to *E. ceylanicum*."

The *E. cristatum* Mart., noted in Körn., Linnaea 27: 607 (1856), is actually *E. miserum* Körn.

It appears that the *W. Griffith* 5568, cited by me as from West Bengal, India, in a previous installment of these notes, is actually from East Bengal, Pakistan. Chand describes *E. cristatum* as "5 in. tall, gray" and found it growing in a meadow in Assam, flowering in June. It has been collected at altitudes of 4000 to 6000 feet. Material has been misidentified and distributed in herbaria as *E. depauperatum* Merr.

Additional citations: PAKISTAN: East Bengal: *H. Bruce* 9 (Br-cotype); *W. Griffith* 5568 (Br, C, S), 5578 (S); *Hamilton* s.n. [Silhet] (Br, N-photo, Z-photo); *F. de Silva* 8 (Br-cotype, N-photo of cotype, Z-photo of cotype); *Wallich* 6070 (B). INDIA: Assam: *Chand* 7814 (Mi). Bombay: *J. Fernandez* s.n. [Arn. Arb. 443] (Xa), s.n. [Arn. Arb. 888] (Xa); *Santapau* 10906 (Xa), 11738 (Xa). Khasi States: *Hooker & Thomson* s.n. [Mont. Khasia, 4-5000 ped.] (B, Br, M, S, Ut-307). Madras: *S. N. Ramaswamy* 17 (Z). Mysore: *S. N. Ramaswamy* 28 (Ac). State undetermined: *Ritchie* 1248 (T).

ERIOCAULON CRISTATUM var. MACKII Hook. f.

Bibliography: Hook. f., Fl. Brit. Ind. 6: 574. 1893; Ruhl. in Engl., Pflanzenreich 13 (4-30): 84 & 285. 1903; Moldenke, Known Geogr. Distrib. Erioc. 23 & 33. 1946; Moldenke, Résumé 162 & 480. 1959.

Hooker (1893) describes this variety as follows: "leaves broader, receptacle densely villous. Assam (probably Khasia). Mrs. Mack. Probably a different species." It is to be noted that if he intended to honor Mrs. Mack, rather than her husband, he did not spell the varietal epithet in the proper manner.



ERIOCAULON CUBENSE Ruhl.

Additional bibliography: Ruhl. in Fedde, Repert. Sp. Nov. 22: 29. 1925; A. W. Hill, Ind. Kew. Suppl. 7: 88. 1929; Moldenke, N. Am. Fl. 19: 18 & 20. 1937; Moldenke, Phytologia 1: 313. 1939; Moldenke, Known Geogr. Distrib. Erioc. 4 & 33. 1946; León, Fl. Cuba 1: 280. 1946; Moldenke, Résumé 53 & 480. 1959.

Additional citations: ISLA DE PINOS: Ekman 12065 (Ca--491274--isotype, N--photo of type, S--type, Z--photo of type).

ERIOCAULON CUSPIDATUM Dalz.

Additional bibliography: Dalz. in Hook., Kew Journ. 3: 281. 1851; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 1, 1: 878. 1893; Hook. f., Fl. Brit. Ind. 6: 581. 1894; Ruhl. in Engl., Pflanzenreich 13 (4-30): 102, 104, 168, & 285. 1903; Fyson, Journ. Indian Bot. Soc. 2: 317--318, pl. 38. 1921; C. E. C. Fischer in Gamble, Fl. Presid. Madras 9: 1606 & 1618. 1931; Moldenke, Known Geogr. Distrib. Erioc. 23 & 33. 1946; Razi, Journ. Mysore Univ. 7 (4): 77. 1946; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 2, 1: 878. 1946; Moldenke, Phytologia 3: 189 (1949) and 3: 322. 1950; Razi, Journ. Mysore Univ. 11 (1): 6 & 16. 1950; Moldenke, Résumé 162, 165, & 480. 1959; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 3, 1: 878. 1960; Thanikaimoni, Pollen & Spores 7: 184. 1965.

Illustrations: Fyson, Journ. Indian Bot. Soc. 2: pl. 38. 1921.

Fyson (1921) describes this species as follows: "Stem disciform. Leaves 1--4 in. by 1/6--1/4 in. exactly oblong up to the round and apiculate or cuspidate apex above 7 nerved. Scapes several 8--15 in. Head 1/4 in. diam., globose, white. Floral bracts cuneate, obovate, hairy. Sepals of both sexes 2 only (F.B.I. has '3, one flat') female sepals deeply boatshaped and enlarged down the back. Seeds oblong, quite smooth. Petals 3, linear-lanceolate, unequal." He gives its distribution as "Peninsular India; N. Mysore; Kanara, at sea-level, Malabar and Concan" and comments that "The leaves make this a very distinct species." He cites Dalziel 138 in the Calcutta herbarium. Razi (1950) also records the species from Mysore.

Additional citations: INDIA: Bombay: Sedgwick & Bell 7016 (Xa, Z). Kerala: Stocks, Law, &c. 20 (B), s.n. [Concan] (S). Mysore: Herb. Presid. Coll. Madras s.n. [21 October '26] (S); E. K. Janaki 327 (M1).

ERIOCAULON CUSPIDATUM var. BRACTEATUM Fyson

Synonymy: Eriocaulon cuspidatum var. bracteata Fyson, Journ. Indian Bot. Soc. 2: 318. 1921.

Bibliography: Fyson, Journ. Indian Bot. Soc. 2: 318. 1921.

ERIOCAULON DALZELLII Körn.

Synonymy: Eriocaulon rivulare Dalz. in Hook., Kew Journ. 3: 280. 1851 [not E. rivulare G. Don, 1849].

Bibliography: Hook., Kew Journ. 3: 280. 1851; Körn., Linnaea 27: 605. 1856; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 1, 1:

878 & 879. 1893; Ruhl. in Engl., Pflanzenreich 13 (4-30): 91 & 285. 1903; H. Lecomte, Not. Syst. 2: 215. 1912; Haines, Bot. Bihar & Orissa 6: 1066--1068. 1924; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 2, 1: 878 & 879. 1946; Moldenke, Known Geogr. Distrib. Erioc. 23, 33, & 39. 1946; Moldenke, Phytologia 3: 189--190. 1949; Razi, Journ. Mysore Univ. 11 (1): 16. 1950; Moldenke, Résumé 159, 162, 167, 291, & 480. 1959; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 3, 1: 878 & 879. 1960; Thanikaimoni, Pollen & Spores 7: 185. 1965.

The *E. rivulare* of Don, mentioned in the synonymy above, is a synonym of *E. latifolium* J. Sm.

Lecomte (1912) states that *E. dalzellii* differs from *E. eberhardtii* H. Lecomte in having its scapes 10- (not 6-) costate and its anthers white (not black).

The *W. Griffith* 5563 and *Herb. R. Wight* 2855, cited by me as *E. dalzellii* in a previous installment of these notes, prove to be *E. odoratum* Dalz. instead. The *Herb. Roy. Forest Dept.* 18174, distributed as *E. dalzellii*, also is actually *E. odoratum*. Razi (1950) records *E. dalzellii* from Mysore.

Additional citations: INDIA: Bombay: *Santapau* 17667 (Xa). Kerala: *Stocks, Law, &c. s.n.* [Malabar, Concan, &c.] (B, M, S, Ut-314). Mysore: *Dhanvantari s.n.* [Castle Rocks, 7-10-51] (Bn-3206). State undetermined: *Dalzell* 1494 (T).

#### ERIOCAULON DAMAZIANUM Beauverd

Additional bibliography: Beauverd, Bull. Herb. Boiss., sér. 2, 8: 986. 1909; Prain, Ind. Kew. Suppl. 4, pr. 1, 82 (1913) and pr. 2, 82. 1938; Moldenke, Known Geogr. Distrib. Erioc. 7 & 33. 1946; Moacyr Lisboa, Cent. Nascim. Leon. Bot. Damazio [2]. 1954; Moldenke, Résumé 88 & 480. 1959.

#### ERIOCAULON DECANGULARE L.

Additional & emended synonymy: *Randalia mariana procerior* Petiv., Gaz. Nat. 10, pl. 6, fig. 2. 1702. *Eriocaulon decangulare* L. ex S. Ell., Sketch Bot. 2: 565, sphalm. 1824. *Randalia decangulare* Desv., Ann. Sci. Nat. Paris, sér. 1, 13: 47, pl. 5, fig. 2, 1828. *Randalia americana* Petiv. apud Kunth, Enum. Pl. 3: 543, in syn. 1841. *Randalia decangularis* Beauv. ex Kunth, Enum. Pl. 3: 543. 1841. *Paepalanthus decangularis* L. ex Körn. in Mart., Fl. Bras. 3 (1): 491 [as "Paepalantho decangulari"]. 1863. *Eriocaulon gnaphalodes* Ell. apud Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 1: 878, in syn. 1893 [not *E. gnaphalodes* Beauv., 1959, nor Michx., 1803, nor C. Wright, 1900]. *Eriocaulon decemangulare* L. ex Moldenke, Résumé 287, in syn. 1959. *Eriocaulon decangulare* Michx. ex Moldenke, Résumé Suppl. 1: 17, in syn. 1959. *Eriocaulon gnaphalodes Bernhardtii* ex Moldenke, Résumé Suppl. 1: 17, in syn. 1959. *Eriocaulon decandulare* L. ex Moldenke, Résumé Suppl. 3:

31, in syn. 1962. Eriocaulon decangular L. ex Kral, Sida 2: 305, sphalm. 1966.

Additional & emended bibliography: Petiv., Gaz. Nat. 10, pl. 6, fig. 2. 1702; L., Sp. Pl., ed. 1, 87 & 129. 1753; Crantz, Inst. 1: 360. 1766; Pluk., Alm. pl. 409, fig. 5. 1769; Walt., Fl. Carol. 83. 1788; Lam., Encycl. Méth. Bot. 3: 276. 1789; Willd. in L., Sp. Fl., ed. 4, 1: 486. 1797; Michx., Fl. Bor.-am. 2: 165. 1803; Pursh, Fl. Am. Sept. 1: 91. 1814; Roem. & Schult. in L., Syst. Veg., ed. 15 nova, 2: 864. 1817; Nutt., Gen. 1: 90. 1818; S. Ell., Sketch Bot. 2: 565—566. 1824; Desv., Ann. Sci. Nat. Paris, sér. 1, 13: 47—48, pl. 5, fig. 2 & 3. 1828; Beck, Bot. 370. 1833; Raf., Autikon Bot., pr. 1, 188—189. 1840; Kunth, Enum. Pl. 3: 543—544, 563, & 580. 1841; Schlecht., Linnaea 18: 435. 1844; W. Griff., Notul. 3: 118. 1851; Körn. in Mart., Fl. Bras. 3 (1): 474, 476, 491, & 497. 1863; Morong, Bull. Torrey Bot. Club 18: 354. 1891; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 1, 1: 878. 1893; Coult., Contrib. U. S. Nat. Herb. 2: 459. 1894; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 1, 2: 681. 1895; Britton & Br., Illustr. Fl., ed. 1, 1: 372 & 602, fig. 901 (1896) and 3: 537. 1896; J. K. Small, Fl. Southeast. U. S., ed. 1, 236. 1903; Ruhl. in Engl., Pflanzenreich 13 (4-30): 1, 31, 33, 35, & 285. 1903; R. M. Harper, Ann. N. Y. Acad. Sci. 17: 267, pl. 24, fig. 1. 1906; M. A. Day, Check List 39. 1908; Robins. & Fern. in A. Gray, New Man. Bot., ed. 7, 261 & 898. 1908; Ann. Rep. N. J. State Mus. 1910: pl. 28, fig. 2. 1912; Britton & Br., Illustr. Fl., ed. 2, 1: 455, fig. 1143. 1913; J. K. Small, Fl. Southeast. U. S., ed. 2, 236. 1913; Uphof in Karst. & Schenck, Vegetationsbild. 21 (1-2): n.p. 1930; J. K. Small, Man. Southeast. Fl. 258. 1933; Cory, Texas Agr. Exp. Sta. Bull. 550: 29. 1937; Moldenke, N. Am. Fl. 19: 18 & 21. 1937; Moldenke, Phytologia 1: 314—316. 1939; Moldenke in Lundell, Fl. Texas 3 (1): 4—5. 1942; Raf., Autikon Bot., pr. 2, 188—189. 1943; Moldenke, Phytologia 2: 124. 1944; R. R. Tatnall, Fl. Del. 75. 1946; Fern., Rhodora 48: iv & 58. 1946; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 2, 1: 878 (1946) and 2: 681. 1946; Moldenke, Known Geogr. Distrib. Erioc. [1]—3, 34, 40, & 56. 1946; Moldenke, Phytologia 2: 153 (1948), 3: 190—192 (1949), 3: 383—385 (1950), and 3: 468. 1951; Thorne, Am. Midl. Nat. 52: 281. 1954; Angely, Pl. Paran. 10: 4. 1957; Moldenke, Résumé 7—12, 14, 23, 27, 287, 288, 292, 293, 342, 350, 414, & 480. 1959; Moldenke, Résumé Suppl. 1: 2, 3, 17, & 23 (1959) and 2: 2. 1960; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 3, 1: 878 (1960) and 2: 681. 1960; Fables, Bartonia 32: 9. 1961; Moldenke, Résumé Suppl. 3: 2—5, 7, & 31 (1962), 4: [1]—3 (1962), 5: 2 (1962), and 6: [1]. 1963; Gleason & Cronquist, Man. Vasc. Pl. 184. 1963; Batson, Wild Fls. S. C. 28. 1964; Moldenke, Résumé Suppl. 11: [1] (1964) and 12: [1]. 1965; Shinnors, Sida 2: 441. 1966; Kral, Sida 2: 302—305 & 330. 1966; Rickett, Wild Fls. U. S. 2 (1): 135 (1967) and 2 (2): 659. 1967; Moldenke, Résumé Suppl. 15: [1] (1967) and 16: [1] & 2. 1968; Moldenke, Phytologia 17: 382. 1968.

Additional illustrations: Petiv., Gaz. Nat. pl. 6, fig. 2.

1702; Batson, Wild Fls. S. C. 28 [in color]. 1964.

It is perhaps worth pointing out here that the homonymous designations, E. decangulare Hill and E. decangulare Huds., are synonyms of the Old World E. septangulare With., E. decangulare Lightf. is the New World E. pellucidum Michx., E. decangulare Willd. is E. humboldtii Kunth, E. gnaphalodes Beauv. and E. gnaphalodes Michx. are E. compressum Lam., and E. gnaphalodes C. Wright is E. pseudocompressum Ruhl. Although Jackson (1893) accredits the homonym, E. gnaphalodes Ell., to S. Ell., Sketch Bot. 2: 565 (1824), the binomial is there plainly attributed to Michaux. The initial letter of the specific epithet is often uppercased.

Eriocaulon decangulare L. is the type species of the genus Eriocaulon. It is worth noting the comments of Kunth (1841) regarding Symphachne xyroides Beauv. & Desv.: "Endlicher cum ? ad Philodice ducit. Planta a cel. Beauvois sub nomine Symphachnis xyroidis accepta nil nisi specimen valde juvenile Eriocauli decangularis esse videtur; florem structuram enucleare mihi haud licuit." The same author, under E. wightianum Mart., comments that "Huic speciei pro aliis habitu accedit E. decangulare Linn."

Kral (1966) says for E. decangulare: "Sandy or peaty lake-shores, pine flatwood, ditches, margins of cypress domes, or savannas, primarily in the coastal plain, Florida north to New Jersey, west to eastern Texas. Type. In swamps, North America. Not seen by this writer. This is the most robust of the Eriocaulons of the southern United States and it is certainly one of the more conspicuous floral elements in the midsummer and fall savannas, its white 'buttons' providing a pleasing contrast in a sea of grass and sedge. It is also to be distinguished from sympatric Eriocaulons by its narrowly acute to acuminate receptacular bractlets, the pale tips of which are noticeably exerted from the heads, and by the firmer character of its foliage and inflorescences. The stature, leaf length and breadth, and the head size of E. decangulare all tend to be less as one travels west toward Texas or north along the Atlantic coastal plain. The largest examples of this species are to be found in northwest Florida (E. decangulare L. var. latifolium Chapm. ex Moldenke)."

Recent collectors have found this plant growing in a great variety of habitats, which they describe as follows: moist or pine savannas, flatwoods, low pinebarrens, low savannas with few scattered pines, boggy pinelands, pinebarren bogs and swamps, bogs in longleaf pine hills, hillside and mountain bogs, pineland swales, shrub bogs and Sarracenia bogs, on gravel in seepage bogs, in sandy clay peat or sandy peat in flatwood bogs, in sandy soil along brooks in cutover longleaf pine country, in pastured pine savannas, in boggy sandy margins and adjacent woods near ponds, burned-over shrub savannas, roadside or acid roadside ditches, in pocosins and pocosin borders, low woodland borders, muddy Sphagnum holes in shaded swamps, exsiccated cypress ponds, in barely emerged Sphagnum, swamp and shallow lake areas in oak

woods, and among severely cutover longleaf pine 'crayfish flats' with much myrtle and sweetgum shrubbery. It ascends to 2500 feet in western North Carolina.

Thorne (1951) states that the species is "common" in moist pinelands, cypress ponds, and bogs; Novosad reports it "abundant in acid bogs, full sun" in Texas; Rock found it "abundant in ditch bordering a Muhlenbergia-Arundinaria grass savannah with pine not yet in aspect dominance; some Clethra and Cyrilla present" in North Carolina; while Webster & Wilbur report it "common in low moist areas in woods of longleaf pine and some hardwoods", also in Texas. Correll & Johnston note that the plants form "large clumps". Lakela found it in "sandy mucky soil and shallow open water; drier soil with forbs and grasses" in Collier County, Florida.

In spite of the statement that it is normally a late-bloomer, specimens have been collected in anthesis from April to September and in November, in fruit both in June and in September and November. Fables (1961) emphasizes that in New Jersey it blooms later than E. compressum Lam. Tatnall (1946) avers that on the Delmarva Peninsula it occurs mostly in Sussex County pinebarrens, flowering from July to September. The Lundells say for their no. 11902 "perennial herb, corolla yellow, anthers orange", but surely this must be a case of faulty transcription when the labels were made.

Arsène 11030 in the Berlin herbarium has a printed label reading "PL. du MEXIQUE", but a longhand inscription "Covington"; no. 11786 has a similar printed label and the inscription "Covington-Fairview". Obviously the specimens are from Louisiana, not Mexico.

The Palisot de Beauvois s.n., cited below, is the type collection of Symphachne xyrioides Beauv. & Desv., but the labels are inscribed "Symphachne xyrioides Beauv." and "S. xyrioides Palis."

Ahles & Leisner 31896 and Ray, Lakela, & Patman 10062 exhibit binary flower-heads! C. R. Bell s.n. [Sept. 10, 1958] exhibits 3 binary flower-heads with large foliaceous-proliferated involucre bractlets. Mikula 3056 has very soft compressed heads; J. T. Baldwin Jr. 14824 is from the same locality and is very immature but doubtless conspecific. Possibly this may represent a hybrid with E. compressum Lam. Godfrey 48489 and B. W. Wells s.n. [July 14, 1949] have very narrow leaves; similarly, B. W. Wells s.n. [Burgaw, 6/23/1945] has very narrow and not very firm leaves, but its heads are still very immature. Perhaps these may also represent this hybrid.

The F. A. Barkley 13543, cited by Kral as typical E. decangulare, is the type collection of var. minor Moldenke, and Kral 17208 also represents that variety. Lighthipe s.n. [Tom's River, Sept. 1, 1890] is a mixture with E. compressum var. harperi Moldenke. The Jansson s.n. [Aug. 26, 1950] specimen, cited below, is a mixture with E. compressum Lam. and is so mounted that the E.

decangulare scape appears to be issuing from an E. compressum basal leaf-rosette!

Material has been misidentified and distributed in herbaria under the names E. anceps Walt., E. articulatum (Huds.) Morong., E. compressum Lam., E. septangulare With., E. texense Körn., Lachnocaulon sp., and even Phalaris arundinacea L.

On the other hand, the Bell & Kim 281, W. M. Canby s.n. [Daup Pine Barrens, 1859], R. L. Crockett 6697, Curtiss s.n. [Jacksonville] & s.n. [Pine barren swamps, July 188-], and Radford & Stewart 328, distributed as E. decangulare, are all E. compressum Lam.; S. F. Blake 10665 is E. compressum var. harperi Moldenke; Tharp, Turner, & Johnston 54954 is E. texense Körn.; and B. E. Smith s.n. [5/25/32] is Lachnocaulon anceps (Walt.) Morong. According to Kral, the F. A. Barkley 13543 & 13556, Painter & Barkley 13540, Rowell 8050 & 8136, and Tharp 4434, 44344, & 44344b, all cited by me as E. texense, are actually E. decangulare; Novosad 80, distributed as E. texense, is also E. decangulare. Actually, I regard F. A. Barkley 13543 as the type collection of E. decangulare var. minor Moldenke, and Kral 17208, distributed as E. decangulare, also represents that variety.

Additional citations: NEW JERSEY: Atlantic Co.: Diffenbaugh 3016 (Dt); C. A. Gross s.n. [Weymouth Paper Works, Aug. 15, 1883] (Ca--67329), s.n. [Aug. 29, 1883] (Ca--67330), s.n. [July 1891] (Dt); Killip 13290 (S). Burlington Co.: R. C. Alexander s.n. [Batsto, 24 Jul. '69] (Ca--379006); J. A. Allen s.n. [Atsion, Aug. 14, 1879] (Ca--2410); Brinton s.n. [Quaker Bridge, June 22, 1880] (Ca--67586); Chrysler & Johnson s.n. [Aug. 11, 1936] (B); Commons s.n. [Oct. 1, 1872] (Ms--15467); Dautum s.n. [Sept. 20, 1907] (B); E. H. Eames 23387 (Ws), s.n. [Chatsworth, Sept. 15, 1896] (S), s.n. [Chatsworth, Sept. 15, 1897] (Hi--77052); Ewer 1104 (Ms--43549); Fogg 4542 (S); Johnson & Ewer 914 (Ms--43550); Lawrence & Dress 575 (Ca--805354); W. H. Leggett s.n. [Quaker Bridge, Aug. 8th, 1864] (N); O. Reed s.n. [Quaker Bridge, July 22, 1950] (We); W. R. Taylor T.588 (Mi). Camden Co.: J. W. Adams 49-358 (Hi--56425); G. W. Bassett s.n. [Atco, July 19, 1923] (S, Ws); Buckheister 901 (Dt), s.n. [Cedar Brook, 31 July '99] (Dt). Cape May Co.: G. W. Bassett s.n. [Cold Spring, July 16, 1917] (S). Ocean Co.: E. J. Alexander s.n. [Forked River, Sept. 18, 1932] (N); N. L. Britton s.n. [Manchester, Aug. 28, 1879] (N), s.n. [Forked River, Aug. 17, 1889] (Ca--2409); E. H. Day s.n. [Island Heights, 1.9.82] (N); Eggleston 4894 (Dt); Heuser s.n. [3 Sept. 1896] (B); Jansson s.n. [Aug. 26, 1950] (Go); F. C. Lane 1870 (Ur); Lighthipe s.n. [Tom's River, Sept. 1, 1890] (Ca--841790); Mackenzie 4257 (S). County undetermined: W. M. Canby s.n. [Pine barrens, Aug. 1861] (Ws), s.n. [July 1864] (Ms--15472);

W. R. Taylor T.1073 [Davenport] (Mi); J. Torrey 22 (S); Tweedy s. n. [Pine barrens, Sept. 1881] (Ca--173634). PENNSYLVANIA: Philadelphia Co.: G. Watson s.n. [Philadelphia] (Ca--379005). County undetermined: Herb. Braun s.n. (B). DELAWARE: Sussex Co.: H. R. Baker s.n. [1 Sept. 1930] (Ws); Goodale 62518 [Herb. Piper 1203] (Ok), s.n. [10 Sept. 1931] (Ms--62518). County undetermined: Bernhardi s.n. (B). MARYLAND: Baltimore Co.: Morong s.n. [Aug. 11, 1873] (Bc). Prince Georges Co.: S. F. Blake 7989 (Ca--841791), 10665 (S); E. H. Walker 4160 (N). DISTRICT OF COLUMBIA: M. S. Bebb s.n. [Herb. Umbach 17933] (Ws); T. Holm s.n. [22/7/1888] (S, S), s.n. [7-1888] (B); F. H. Sargent 6374 (Ok, St); C. S. Sheldon 8371 (Ca--189377); Steele s.n. [July 1912] (S). VIRGINIA: James City Co.: J. T. Baldwin Jr. 14824 (N); Mikula 3056 (N); H. N. Moldenke 21357 (Le). Norfolk Co.: Fernald & Long 13908 (We); Hubricht B.2508 (E--1284021). NORTH CAROLINA: Alexander Co.: Radford & Stewart 1657 (Hi--22656). Alleghany Co.: A. E. Radford 38341 (Hi--119248). Beaufort Co.: Davis & Davis 10511 (We). Bladen Co.: Ahles 458/48 (Ur); Ahles & Haesloop 29110 (Hi--119257); Fox & Godfrey 2653 (N). Brunswick Co.: R. K. Godfrey 48396 (N); B. W. Wells s.n. [July 14, 1949] (No--19791); Wood & Clement 7067 (Hi--51189). Buncombe Co.: Biltmore Herb. 3867a (Hi--77040), 3867d (S). Carteret Co.: Blomquist 15262 (Ca--946493); A. E. Radford 4705 (Hi--48384); C. E. Wood 6407 (Hi--51167). Catawba Co.: Small & Heller s.n. [June 25-26, 1891] (Ms--15470). Clay Co.: Radford & Duke 6445 (Hi--53842), 6453 (Hi--53752). Columbus Co.: C. R. Bell 12710 (Hi--119263); R. K. Godfrey 48489 (No--16392); P. O. Schallert s.n. [Nakina, 6/25/34] (Ca--540128). Craven Co.: A. E. Radford 37513 (Hi--119262); B. W. Wells s.n. [July 14, 1923] (No--2625). Cumberland Co.: Ahles & Leisner 33488 (Hi--119264). Dare Co.: P. O. Schallert s.n. [July 12, 1941] (Ca--841787, Hi--30287, Ok, Ur), s.n. [July 13, 1941] (Ca--841786); B. W. Wells s.n. [July 7, 1923] (No--2623). Duplin Co.: Ahles & Haesloop 28499 (Hi--119254). Harnett Co.: H. Laing 1439 (Hi--97154). Henderson Co.: Barksdale s.n. [8/10/37] (Hi); Singletary s.n. [Gier 365] (Je--6551). Hoke Co.: Ahles & Haesloop 29454 (Hi--119266). Iredell Co.: M. E. Hyams s.n. [Statesville] (Dt); A. E. Radford 2679 (Hi--47998); Radford & Radford 2637 (Hi--30729); Veerhoff s.n. [7/30/1934] (No--2624). Johnston Co.: Deans s.n. [Aug. 1932] (Hi--77036). Jones Co.: A. E. Radford 37120 (Hi--119247). Lenoir Co.: A. E. Radford 25772 (Hi--97159). Lincoln Co.: C. R. Bell s.n. [Sept. 10, 1958] (Hi--134743, Hi--134744). Moore Co.: Ashe s.n. [June 20, 1897] (Hi--24869); Blankinship s.n. [Southern Pines, July 18, 1895] (Lb--20643); Mathews & Holland s.n. [Oct. 26, 1929] (Hi--77037, Hi--77039). New Hanover Co.:

Biltmore Herb. 3867b (Hi--77041). Onslow Co.: C. E. Wood 6520  
 (Hi--51165, N). Pamlico Co.: A. E. Radford 35963 (Hi--119261).  
 Pender Co.: Ahles & Leisner 32349 (Hi--119260); Barksdale s.n.  
 [7/13/37] (Hi--77035); R. K. Godfrey 4740 (No--2630); Herb. North  
Carolina State Coll. 2628 (No); H. F. L. Rock 631 (St); B. W.  
Wells s.n. [July 2nd, 1924] (No--2626), s.n. [Burgaw, 6/23/1945]  
 (No--2619, No--2635). Richmond Co.: A. E. Radford 14458 (Hi--  
 97161). Robeson Co.: Ahles & Haesloop 29038 (Hi--119251). Rowan  
 Co.: A. A. Heller 180 (Ca--2408), 181 (Ca--2413). Sampson Co.:  
Ahles & Leisner 33690 (Hi--119255). Scotland Co.: Ahles & Haes-  
loop 28610 (Hi--119256, St). Tyrrell Co.: A. E. Radford 39234  
 (Hi--119249). Roanoke Island [Dare Co.]: A. E. Radford 4644  
 (Hi--48382); Radford & Stewart 907 (Ca--841788, Hi--15046); P. O.  
Schallert 535 (B). County undetermined: G. McCarthy s.n. [Julius  
 1884] (Hi--77038), s.n. [Julio 1885] (Hi--24868). SOUTH CAROLI-  
 NA: Allendale Co.: C. R. Bell 3983 (Hi--97168). Bamberg Co.:  
Ahles & Haesloop 30487 (Hi--119259). Beaufort Co.: Ahles & Bell  
12381 (Hi--97169). Berkeley Co.: Ahles & Haesloop 26429 (Hi--  
 97170), 30671 (Hi--119258); Godfrey & Tryon 603 (Ca--957175); R.  
F. Martin 1187 (N). Charleston Co.: M. Haas s.n. [June 28,  
 1930] (Go). Chesterfield Co.: A. E. Radford 12455 (Hi--97172).  
 Clarendon Co.: A. E. Radford 24605 (Hi--97171). Colleton Co.:  
C. R. Bell 4583 (Hi--97173). Darlington Co.: W. C. Coker s.n.  
 [8/15/1908] (Hi--77047), s.n. [July 5, 1909] (Hi--77048); J. B.  
Norton s.n. [July 12, 1920] (Hi--77045); Radford & Stewart 397  
 (Hi--15712). Dillon Co.: Ahles & Haesloop 27862 (Hi--119252).  
 Dorchester Co.: Ahles & Haesloop 26181 (Hi--97174); Ahles &  
Leisner 31896 (Hi--119253). Florence Co.: C. R. Bell 7553 (Hi--  
 97175). Georgetown Co.: Godfrey & Tryon 343 (Ca--957181, M1);  
P. O. Schallert s.n. [9/1/40] (Ws). Hampton Co.: C. R. Bell  
3891 (Hi--97176); Wilbur & Webster 2833 (N). Horry Co.: C. R.  
Bell 7785 (Hi--97189). Jasper Co.: C. R. Bell 4937 (Hi--97190).  
 Kershaw Co.: H. D. House 2691 (E); A. E. Radford 27640 (Hi--  
 97155). Lee Co.: A. E. Radford 27382 (Hi--97191). Marlboro Co.:  
Houten & Schoenmakers 1021 (Ut--52773a); A. E. Radford 15565  
 (Hi--97160). Orangeburg Co.: Ahles & Leisner 31792 (Hi--119250).  
 Sumter Co.: A. E. Radford 24007 (Hi--97162). Williamsburg Co.:  
Godfrey & Tryon 509 (Ca--957174); A. E. Radford 24753 (Hi--97163).  
 GEORGIA: Bacon Co.: A. R. Moldenke 348 (Fg). Ben Hill Co.: W.  
H. Rhoades s.n. [Fitzgerald, Aug. 1926] (Ws). Bleckley Co.: A.  
R. Moldenke 380 (Fg). Chatham Co.: Herb. Mt. Holyoke Sem. s.n.  
 [Savannah] (Dt). Clinch Co.: A. R. Moldenke 333 (Fg, S). Dodge  
 Co.: A. R. Moldenke 418 (Fg). Dooly Co.: J. T. Curtis s.n. [Aug.  
 3, 1939] (Ws). Douglas Co.: Cronquist 5425 (Ca--777560, N).



Grady Co.: A. R. Moldenke 302(Fg). Jeff Davis Co.: A. R. Moldenke 349 (Fg). Lee Co.: Thorne & Muenscher 8308 (Vi). Lowndes Co.: A. R. Moldenke 316 (Fg). McIntosh Co.: Harmer 618 (S). Screven Co.: A. R. Moldenke 417 (Fg). Telfair Co.: A. R. Moldenke 361 (Fg). Thomas Co.: Mrs. Taylor s.n. [Thomasville, Aug. 4, 1903] (Rf). Ware Co.: A. R. Moldenke 338 (Fg, S); P. O. Schallert 3961, in part (B, Je--7056). Wilcox Co.: W. F. Rhoades s.n. [Abbeeville, July & Aug. 1925] (Ws). Worth Co.: Svenson 6930 (Ca--599919). Blackbeard Island: W. H. Duncan 20365 (Ib--42829). Sapelo Island: W. H. Duncan 20365, in part (Hi--106043, Ws). County undetermined: Beyrich s.n. [Georgia] (B, B). FLORIDA: Bay Co.: Farmer s.n. [July 25, 1959] (Hi--210975); Perdue 1643 (Ca--49708, Rf, Ur, Ut--61167b). Brevard Co.: Melvin s.n. [July 4, 1957] (Hi--119265); H. N. Moldenke 233 (S). Collier Co.: Lakela 30322 (N). Duval Co.: Curtiss 3016 (Ca--2411, Ms--15471), 5690 [June 24] (Ca--142521, Dt), 5690 [Aug. 21] (Ca--142521, Dt); Lighthipe 475 [Herb. Umbach 10991] (Ws). Escambia Co.: M. Morgan P.1 (Ca--841789); Redfearn & Kral 2718 (Hi--111828). Franklin Co.: R. Kral 2813 (N); Redfearn 2665 (N). Hernando Co.: R. A. Howard 12953 (B, B, B, Ca--48674, N, Ok, S, St, Ur, Ut--69634b, Vi, We). Highlands Co.: C. C. Deam 64210 (No--21316). Hillsborough Co.: Ray, Lakela, & Patman 10062 (Hi--201768). Jefferson Co.: Godfrey & Kral 54896 (N). Lake Co.: Nash 847 (Ca--115166, Mn--7960), 1722 (Ca--115169, Mn--7959), s.n. [August 10, 1894] (N). Levy Co.: Kral & Kral 6920 (N). Liberty Co.: A. R. Moldenke 279 (Fg), 283 (Fg); Redfearn 2626 (N). Manatee Co.: Perdue 1757 (Ca--27825, Rf, Ut--61229b); S. M. Tracy 7587 (Ws). Orange Co.: Barrows s.n. [Winter Park, 1894] (Dt). Palm Beach Co.: Fennell & Jones 972 (Ca--841792); W. B. Fox s.n. [Apr. 2, 1945] (No--15827). Pinellas Co.: R. F. Thorne 1353 (Ca--907023). Polk Co.: McFarlin 3418 (Mi), 6213 (Mi), 6216 (Ca--593592, Mi). Putnam Co.: P. O. Schallert 3961 (Hi--56323). Saint Lucie Co.: H. N. Moldenke 21487 (Hk, Sm, Ss). Santa Rosa Co.: E. S. Ford 5416 (Hi--158855); Kral & Redfearn 2932 (Hi--111311); A. R. Moldenke 266 (Fg). Seminole Co.: P. O. Schallert 3961, in part (Je--8731, S, Ur). Volusia Co.: P. O. Schallert 3961, in part (Ws). Wakulla Co.: Kral & Godfrey 2342 (Ms--44728). Walton Co.: A. R. Moldenke 268 (Fg). County undetermined: Herb. Chapman s.n. [Florida] (Ok, Ok). ALABAMA: Baldwin Co.: Demaree 35929 (Ss); Dress & Read 7498 (Go); A. R. Moldenke 265 (Fg); S. M. Tracy 8043 (Ws); W. Wolf s.n. [Elberta, Aug. 21, 1925] (Ca--841793). Cherokee Co.: R. M. Harper 3996 (N). Mobile Co.: C. F. Baker s.n. [Mobile, 7/20/1897] (Hi--77044); Bush 71 (S). Washington Co.: S. B. Jones s.n. [31 Aug. 1960] (Hi--210913). County undetermined: Buckley 132 (Ws), s.n. [Alabama, July 1820] (Br).